

# AUTHOR INDEX

## A

Aaronson, S., 257, 289, 290  
 Abelson, P. H., 179, 184, 257  
 Abonnenc, C. y, 107  
 Abraham, R. G., 223, 226  
 Ackermann, W. W., 67  
 Adachi, R., 266  
 Adair, C. V., 51  
 Adams, S., 383  
 Addario, C., 114  
 Adelberg, E. A., 187, 316  
 Adelson, L. M., 272  
 Agar, H. D., 108  
 Ageeva, L. S., 401  
 Agosin, M., 108, 114  
 Airaper'ian, G. P., 403  
 Aji, S. J., 180, 181, 182, 183, 249  
 Akiba, T., 339  
 Alcorn, S. M., 418, 421, 424, 430  
 Alexander, G. J., 263  
 Alexander, H. E., 326, 357  
 Alexander, J. K., 249  
 Alexander, M., 17, 229, 236  
 Alexopoulos, C. A., 375  
 Alfredson, B. V., 535  
 Aliev, A. N., 407  
 Allison, F., 50, 63  
 Alivierdiev, A. A., 401  
 Alilem, M. I. H., 229  
 Allen, E. J., 288  
 Allen, J. P., 369  
 Allen, M. B., 213, 215, 216, 235, 237, 289, 292, 302  
 Allen, O. N., 418, 430, 483  
 Allison, A. C., 111  
 Allison, F. E., 213  
 Allison, L. E., 542  
 Allison, R. M., 232  
 Al'tgauzen, A. J., 114  
 Altman, J., 425  
 Alves, W., 117  
 Alving, A. S., 111  
 Amano, T., 5, 8  
 Ambrose, J. F., 533  
 Amdur, B. H., 262  
 Ameel, D. J., 117  
 Ames, B. N., 252  
 Amies, C., 84  
 Ammich, O., 110  
 Amos, H., 270  
 Anchevs'ka, M. S., 404  
 Andersen, A. L., 420  
 Anderson, A. W., 514, 515  
 Anderson, E. H., 184, 296  
 Anderson, E. J., 444  
 Anderson, G. C., 286

Anderson, G. R., 237  
 Anderson, H. H., 106  
 Anderson, H. W., 416, 425, 431  
 Anderson, P. J., 427  
 Anderson, R. E., 165  
 Anderson, S. A., 51, 52, 59, 65  
 Anderson, T. F., 34, 340, 344  
 Anderson, W. P., 419, 420  
 Andonov, P. S., 392  
 Andrewes, C. H., 58, 65  
 Andrews, B. E., 49, 50, 58, 60, 61, 63, 64, 66, 67, 68, 69  
 Andrews, W. H. H., 111  
 Angel, H. R., 482  
 Angelo, C., 106  
 Ani, A. S. E., see El-Ani, A. S.  
 Ansari, N., 106  
 Anthony, D. S., 179, 183  
 Aposhian, H. V., 269  
 Apparao, A., 206  
 Appleman, M. D., 229  
 Apt, L., 113  
 Aquist, S., 164  
 Arber, W., 34, 35  
 Arie, T., 66  
 Ark, P. A., 415, 416, 418, 419, 421, 422, 430, 434  
 Arkhipova, O. P., 398  
 Armstrong, J. K., 453  
 Arndt, W. F., 5, 7, 11, 34, 346  
 Arnold, G., 111  
 Arnon, D. I., 222, 234, 235  
 Arnstein, H. R. V., 264  
 Army, D. C., 428  
 Aronson, A. I., 15, 259  
 Aronson, B., 61, 64  
 Aronson, S., 61, 64  
 Artemova, L. I., 230  
 Artman, M., 204, 217  
 Asano, N., 267  
 Aschner, M., 292  
 Ash, J. E., 110  
 Ashby, D. R., 263  
 Askalonov, S. P., 397  
 Asnis, R. E., 209, 227  
 Assis-Lopes, L., 249  
 Astrachan, L., 41  
 Atkins, W. R. G., 287  
 Atkinson, D. E., 224, 250  
 Atkinson, H. J., 176  
 Atwood, K. C., 313, 373  
 Auclair, J. E., 267  
 Audus, L. J., 177  
 Auerbach, S. H., 50, 63  
 Auerbach, V. H., 535

Augier de Montgremier, H., 485  
 Aurand, L. W., 251  
 Averbach, B. C., 223, 226  
 Avigad, G., 164  
 Aytoun, R. S. C., 435  
 Azim, M. A., 115, 233, 234

## B

Baalsrud, K., 213  
 Baalsrud, K. S., 213  
 Baar, H. S., 110  
 Babero, B. B., 117, 118  
 Bach, D., 536  
 Bach, M. K., 233, 299, 300  
 Bachrach, U., 164  
 Backus, M. P., 374, 375  
 Bacon, G. A., 78, 79, 87, 95, 96  
 Badger, G. F., 50, 51, 54, 55, 58, 59, 60, 61, 62, 63  
 Baer, H., 170  
 Baernstein, H. D., 103, 105  
 Bail, O., 81, 82, 87, 88, 91  
 Bailey, G. H., 81, 98  
 Bailey, L., 265  
 Baker, E. E., 81, 96  
 Baker, F., 160  
 Baker, H., 251, 289, 290  
 Baker, R., 375  
 Baker, Z., 539  
 Bakerman, H., 542  
 Bakerspiegel, A., 373  
 Balch, H. W., 503  
 Bald, J. G., 442  
 Baldi, E., 293  
 Balducci, D., 58, 61  
 Baldwin, H. S., 503  
 Baldwin, I. L., 478  
 Baldwin, J. N., 504  
 Balis, M. E., 269  
 Ball, E., 477  
 Ball, G. H., 115  
 Ballamuth, W., 105  
 Bamforth, S. S., 282  
 Bancroft, W. D., 533  
 Bang, B., 138  
 Bang, F. B., 65, 66, 116  
 Banks, R. M., 534  
 Barber, M., 503, 504  
 Barbosa, F. S., 115, 116  
 Barbour, E., 367, 369  
 Barchielli, G., 253  
 Bard, R. C., 148, 154, 226  
 Barker, H. A., 146, 148, 152, 187, 188, 190, 212, 213, 216  
 Barksdale, W. L., 357  
 Barkulis, S. S., 180

- Barner, H. D., 256, 259, 312, 313, 314, 339  
 Barnes, R. B., 534  
 Barnett, A. J. G., 223  
 Baron, L. S., 339, 347, 355  
 Barrington, L. F., 31, 34  
 Barron, E. S. G., 179, 531  
 Barski, G., 57  
 Bartmann, K., 18  
 Baten, W. D., 535  
 Bates, C. J., 510, 513  
 Batiuk, I. F., 404  
 Batt, R. D., 254  
 Batten, J. C., 502  
 Batzer, O. F., 508  
 Bauchop, T., 154  
 Bauman, N., 5, 9  
 Bauman, P. M., 116  
 Baumann-Grace, J. B., 4, 6  
 Baumberger, J. P., 531  
 Baumstark, J. S., 226  
 Bayley, S. T., 159  
 Bazeley, P. L., 528  
 Bazire, G. C., see Cohen-Bazire, G.  
 Beach, W. S., 426  
 Beadle, G. W., 365, 368, 370  
 Beal, R., 60  
 Beale, A. J., 50, 60, 61, 63, 67  
 Beale, G., 310  
 Beale, H. P., 416  
 Beattie, C. P., 109, 110  
 Beautyman, W., 113  
 Beaver, D. J., 270  
 Beaver, P. C., 104, 106, 112, 113, 114, 117  
 Bećarević, A., 351  
 Becker, C. E., 105  
 Becking, J. H., 237  
 Beecher, F. S., 422  
 Beer, M., 159  
 Behrer, M. R., 113  
 Behrman, E. J., 167  
 Beljerinck, M. W., 212, 443  
 Beiser, S. M., 332  
 Bekker, J. H., 542  
 Belaia, I. A., 397  
 Beletskaia, L. V., 396  
 Bellakov, E. V., 394  
 Beljanski, M., 261, 320  
 Beljanski, M., 261  
 Bell, J. A., 49, 50, 51, 52, 53, 54, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68  
 Bell, S. D., 63, 98  
 Bell, W., 422  
 Bellamy, W. D., 508, 510, 511, 512  
 Belozerskii, A. N., 388, 389  
 Belser, W. L., 344  
 Belt, M., 296  
 Belton, F. C., 92  
 Beltz, R. E., 270  
 Bendich, A., 332  
 Benenson, A. S., 116  
 Ben-Ishai, R., 259  
 Bennet, B. L., 528  
 Bennett, C. R., 56  
 Bennett, C. W., 442, 445, 446, 447, 448, 450, 451, 452  
 Bennett, M., 417  
 Benoit, R. J., 294, 301  
 Ben-Porat, T., 5, 15, 16  
 Bentler, E., 111  
 Bentley, R. L., 185  
 Benzer, 28  
 Benzer, S., 43, 348, 350, 369  
 Berberian, D., 106  
 Bergdoll, M. S., 494  
 Berge, T. O., 51, 58, 59, 63  
 Bergqvist, S., 500  
 Berk, R. S., 514, 515  
 Berkeley, G. H., 454, 455, 457, 462  
 Berman, L., 98  
 Bernasovska, E. P., 404  
 Bernstein, H., 341, 358  
 Bernston, H. W., 51, 60, 61, 62  
 Bertani, G., 27, 44, 338  
 Bevacqua, R., 114  
 Beverley, J. K. A., 109  
 Bezborodov, A. M., 386  
 Bhattacharyya, P. K., 425  
 Bierstein, P., 117  
 Bietti, G. B., 62  
 Bigg, E., 539  
 Bilinski, E., 207  
 Billen, D., 512  
 Bird, T. J., 356  
 Bistis, G., 372, 376  
 Bitancourt, A. A., 473  
 Bitkova, A. N., 389  
 Black, L. M., 485  
 Black, W. A. P., 288  
 Blackwood, J. D., 543  
 Blagoveshchenskii, V. A., 391  
 Blair, J. E., 492, 493, 503  
 Blanchard, F. A., 418  
 Blattberg, B., 503  
 Blevins, A., 502  
 Blüger, A. F., 397  
 Bloch, D. P., 56, 57  
 Bloch, H., 82, 86, 92, 93  
 Block, K., 262  
 Blom, N. O., see Oker-Blom, N.  
 Bloom, W. L., 82, 87, 88, 89, 90, 91  
 Bloomfield, R., 113  
 Blount, R. E., Jr., 49, 69  
 Blum, L., 111  
 Bobosch, K., 29, 30, 31, 34, 36  
 Bogoiavlenskaia, N. L., 392  
 Boisen, M., 528  
 Bolton, E. T., 179, 184, 257, 269  
 Bonanno, S., 263  
 Bonavia, L. L., 114  
 Bond, G., 237, 238, 291  
 Bonde, G. J., 250, 255  
 Bonde, R., 423, 424, 434  
 Bonner, D. M., 353, 368, 369  
 Bonner, J., 473  
 Bonnier, C., 236  
 Bonventre, P. F., 517  
 Boone, D. M., 372, 377  
 Boretti, G., 253  
 Borghans, J. G. A., 60  
 Borisova, M. A., 397  
 Borlu, S. I., 393  
 Borodinok, N. A., 396  
 Bostick, W. L., 106  
 Boswell, G. A., 263  
 Bourne, W., 543  
 Bouthilet, R., 542  
 Boutsellis, J. G., 58  
 Bové, C., 234  
 Bové, J., 234, 474  
 Boyd, A. G., 141  
 Boyer, G. S., 54, 56, 57  
 Boyle, A. M., 415, 418  
 Boyle, J. S., 458  
 Boylen, J. B., 351  
 Bozicevich, J., 105  
 Braarud, T., 286, 295  
 Bracco, R. M., 326, 357  
 Bradin, J. L., Jr., 104, 105  
 Bradley, S. G., 346  
 Brady, F., 105  
 Braendle, D. H., 346, 358  
 Brainina, E. S., 401  
 Braithwaite, G. D., 262  
 Brakke, M. K., 485  
 Brandly, C. A., 77  
 Brandon, F. B., 52  
 Brasch, A., 508  
 Brase, K. D., 453, 454, 456, 459  
 Braun, A. C., 470, 477, 478, 479  
 Braun, W., 81, 97, 335  
 Brawerman, G., 258, 259  
 Breckhoff, E., 61  
 Breed, R. S., 443  
 Brenes-Pomales, A., 366  
 Brenner, S., 6, 10, 15, 40, 350  
 Bresch, C., 42, 43  
 Brewer, J. H., 530, 531, 532  
 Brian, P. W., 415, 425, 431  
 Bridges, A. E., 514  
 Bridgman, G. H., 461  
 Broidoux, M., 4, 10, 14  
 Brierley, P., 460, 461, 462  
 Brignon, J. J., 271  
 Bringmann, G., 18  
 Britt, E. M., 4, 7, 10  
 Britten, R., 205  
 Britten, R. J., 179, 184  
 Broadbent, D., 207  
 Broadbent, L., 448  
 Brodie, A. F., 152, 153, 236  
 Brogle, R. C., 520  
 Brooke, M. M., 103, 105, 106  
 Brooke, M. S., 186  
 Brooksby, J. B., 135

Brown, B., 187  
 Brown, D. D., 35  
 Brown, D. H., 163, 264  
 Brown, E. R., 325, 333  
 Brown, F., 301  
 Brown, G. B., 269  
 Brown, G. L., 333  
 Brown, G. M., 253  
 Brown, H. W., 105  
 Brown, I. B. R., 223  
 Brown, J., 110  
 Brown, J. G., 415, 417, 418  
 Brown, M. E., 237  
 Brownell, L. W., 227  
 Bruce White, G. B., 67  
 Bruemmer, J. H., 153, 236  
 Brug, S. L., 110  
 Brumpt, E., 103  
 Bruna, F., 62  
 Bruno, P., 541  
 Brutman, E. I., 387  
 Bucca, M. A., 541  
 Buchholtz, W. F., 457, 459  
 Buck, J. M., 139  
 Buckley, J. J. C., 117  
 Budovich, T., 165, 166  
 Budylna, V. V., 397  
 Budzhe, M. M., 397  
 Buffa, N. T., 514, 521  
 Bukrinskaya, A. G., 66  
 Bulen, W. A., 226, 234, 270  
 Bulmash, J., 251  
 Bundesen, H., 103  
 Bunting, M. I., 344  
 Burgi, E., 27, 39, 43  
 Burke, D., 419  
 Burke, J., 85, 86  
 Burkholder, L. M., 301  
 Burkholder, P. R., 301  
 Burma, D. P., 208, 232  
 Burnet, F. M., 65  
 Burnett, G., 444  
 Burnett, J. H., 376  
 Burns, V. W., 510  
 Burris, R. H., 203, 208, 230,  
 231, 232, 233, 234, 236,  
 461, 482, 486  
 Burrous, J. W., 346, 358  
 Burrows, T. W., 78, 79, 87,  
 95, 96  
 Burston, J., 504  
 Burton, K., 39  
 Burton, M. O., 265  
 Burton, R. M., 149  
 Bustamente, W., 110  
 Busvine, J. R., 112  
 Butler, J. A. V., 6, 10, 333,  
 365  
 Butler, R. L., 51, 58  
 Buttin, G., 259  
 Buxton, E. W., 378  
 Buyze, G., 149  
 Buzina, O. D., 230, 233

## C

Cabib, E., 161

Cade, A. R., 533, 536, 537  
 Caglioti, M. T., 374  
 Cain, R. F., 513, 514, 515  
 Cairney, T. J., 421, 425  
 Caldwell, R., 113  
 Caldwell, R. M., 378  
 Calef, E., 369  
 Callely, A. G., 183  
 Callis, J. J., 541  
 Calvery, H. O., 535  
 Cameron, H. R., 455  
 Cameron, T. W. M., 117  
 Camien, M. N., 269, 271  
 Campbell, A., 324, 337  
 Campbell, J. J. R., 145, 181,  
 183, 184, 249  
 Campbell, L. L., Jr., 270  
 Campillo, A. del, 179  
 Candela, M. I., 221, 222  
 Cantino, E. C., 377  
 Cantoni, G. L., 258  
 Caplan, J. P., 113  
 Caplin, S. M., 474, 475  
 Cardini, C. E., 161, 264  
 Carey, W. F., 347  
 Carneiro, E., 116  
 Carpenter, C. M., 138  
 Carpenter, J. H., 290  
 Carr, M., 503  
 Carre, M. C., 57  
 Carrera, G. M., 103, 104,  
 113  
 Carritt, D. E., 290  
 Carson, S. F., 149, 179, 183  
 Carter, F. R. N., 103, 106  
 Carter, H. E., 425  
 Carvajal, F., 263  
 Case, M. E., 367, 369  
 Castex, M. R., 103  
 Catchside, D. G., 370  
 Cathie, I. A. B., 109  
 Cation, D., 417, 454, 455,  
 457  
 Cavallieri, L. F., 333  
 Cavalli-Sforza, L. L., 309,  
 341, 342  
 Ceglowski, W. S., 259  
 Chain, E., 502  
 Chaix, P., 264  
 Chamberlain, D. M., 109  
 Chamberlain, D. W., 429  
 Chamberlin, G. C., 457  
 Chambers, C. W., 527, 534  
 Chambers, L. A., 534  
 Chandler, A. C., 107  
 Chandler, V. L., 514, 521  
 Chang, E., 114  
 Chang, P. C. H., 107  
 Chang, R. S., 63  
 Chanock, R. M., 49-76; 49,  
 66, 67, 68, 69, 70  
 Chany, C., 50, 57, 63  
 Chapman, G. B., 1  
 Chaproniere, D. M., 54, 61,  
 65  
 Charalampous, F. C., 254  
 Chardome, M., 115

Chargaff, E., 5, 10, 19, 347  
 Charles, F. M., 419  
 Charm, S. E., 520  
 Charney, W., 263  
 Chase, M., 27, 30, 31, 37, 40,  
 42, 43  
 Cheever, F. S., 64  
 Cheldelin, V. H., 153, 154,  
 187, 267  
 Cheney, P. W., 457  
 Chenia, G. M., 219  
 Chernomordik, A. B., 384  
 Chernysheva, M. I., 405  
 Cherry, W. B., 325  
 Chertkova, F. A., 403  
 Chertkova, M. A., 407  
 Cherviakova, K. I., 387  
 Chesbro, W. R., 514, 518  
 Chi, L., 68  
 Chichester, C. O., 262  
 Chick, H. J., 527  
 Chidester, J. L., 463  
 Chikaleva, L. V., 407  
 Chinn, B. D., 104  
 Chomwell, H. W., 532  
 Choporova, M. I., 387  
 Choquette, L. P. E., 103  
 Chow, A. W., 421, 425  
 Chow, T. J., 288  
 Christensen, J. J., 377  
 Chu, E., 324  
 Chu, G. W. T. C., 117  
 Chu, M. Y. W., 235  
 Chu, S. P., 283, 292, 294  
 Chumaevskaia, M. A., 398  
 Chung, C. W., 212, 215, 216,  
 225  
 Church, B., 146  
 Ciak, J., 5, 10, 18, 20, 259  
 Cifonelli, J. A., 163  
 Clark, F. E., 542  
 Clark, F. M., 254  
 Clark, J. H., 517  
 Clarke, N. A., 52  
 Clayman, C. B., 111  
 Clayton, C. N., 416, 457  
 Clayton, E. E., 425, 449  
 Cleveland, L. R., 104  
 Clifton, C. E., 187  
 Cline, J., 29  
 Clowes, R. C., 349  
 Clubb, M. E., 264  
 Coatney, G. R., 111  
 Cochran, G. W., 463  
 Cochran, L. C., 455, 457  
 Cockburn, T. A., 55, 60, 61,  
 64  
 Cockeram, A., 62  
 Cocking, E. C., 83, 95, 96,  
 97  
 Coe, D. M., 422, 424  
 Coelho, M. V., 116  
 Cohen, G. N., 193, 247, 258,  
 259, 268  
 Cohen, M. S., 181  
 Cohen, S. S., 256, 259, 312,  
 313, 314, 339

- Cohen-Bazire, G., 356  
 Cohn, M., 146  
 Cole, C. R., 109  
 Cole, H., Jr., 428, 429, 430  
 Coleman, V. R., 51, 62  
 Collier, A., 287, 297  
 Collins, F. M., 213  
 Collins, H. S., 502  
 Collins, V. P., 518  
 Colobert, L., 4, 5, 6  
 Colovos, G. C., 508  
 Colvin, J. R., 158, 159  
 Colwell, C. A., 541, 542  
 Comegys, W. A., 425  
 Comolli, R., 340  
 Conover, R. A., 424, 425  
 Conover, S. A. M., 290  
 Conrat, H. L. F., see  
   Fraenkel-Conrat, H. L.  
 Conway, E. J., 12  
 Cook, K., 49, 66, 67, 68,  
   69  
 Cook, M. K., 109  
 Cooley, L. M., 447  
 Cooper, D. C., 487  
 Cooper, P. D., 3, 20  
 Corey, R. R., 325  
 Cormier, M. J., 228  
 Cort, W. W., 117  
 Costa, A. S., 452  
 Costilow, R. N., 222, 251  
 Cothran, F. V., 320  
 Cotter, E. F., 50, 63  
 Couch, H. B., 428, 429  
 Coughlin, C. A., 316  
 Cowey, C. B., 299, 300  
 Cowie, D. B., 179, 184, 205,  
   257, 258  
 Cowper, S. G., 116  
 Cox, R. S., 421, 425  
 Craig, C. F., 105, 106  
 Cramblett, H., 67  
 Cramer, D. I., 108  
 Crandall, D. I., 167  
 Crane, F. L., 153, 236  
 Crane, H. R., 41  
 Crathorn, A. R., 6, 10  
 Crawford, I., 257  
 Crick, F. H. C., 38, 350  
 Cromartie, W. J., 82, 87,  
   88, 89, 90, 91, 94, 95  
 Crook, E. M., 160  
 Cropley, R., 457  
 Crosier, W., 428  
 Crossan, D. F., 421, 425  
 Crosse, J. E., 417  
 Crowdy, S. H., 432, 433  
 Cruikshank, R., 500  
 Crumpton, M. J., 79, 96  
 Cruz, E. E., 462  
 Culbertson, C. G., 106, 532  
 Cumming, C. S., 163  
 Cummins, C. S., 357  
 Cummins, J. T., 187  
 Curtice, C., 136  
 Curtis, O. F., 458  
 Curtis, R. W., 375  
 Curtiss, C., 54, 59, 60, 61,  
   62, 63  
 Cury, A., 289, 290  
 Cutchins, E. C., 53  
 Cuthbertson, W. F. J., 301  
 Cutinelli, C., 179  
 Cutter, V. M., 486  
 Cynkin, M. A., 149, 164  
 Czarnecki, H. J., 517  
 Czarnetzky, E. J., 530  
 Czosnowski, J., 480  
  
 D  
 Dack, G. M., 494, 520  
 Daengsvang, S., 114  
 Dagley, S., 167, 170, 171,  
   183  
 Daines, R. H., 417  
 Daisley, K. W., 299  
 Dark, F. A., 4, 9, 163  
 Darker, G. D., 542  
 Darling, H. M., 487  
 Darrow, G. M., 462  
 Dascomb, H. E., 51, 58, 59  
 Das Gupta, N. N., 108  
 Dashkevich, I. O., 406  
 Dauben, W. G., 263  
 Davidson, O. W., 429, 432  
 Davies, D. A. L., 79, 96,  
   166  
 Davies, D. L. G., 461  
 Davies, E. B., 235  
 Davis, B. D., 5, 9, 247,  
   268  
 Davis, B. H., 418, 425  
 Davis, C., 103  
 Davis, D., 68, 425  
 Davis, J. B., 179, 183  
 Davison, P. F., 365  
 Davison, S., 510  
 Davisson, E. O., 532  
 Dawes, E. A., 149, 151  
 Dawson, L. M., 3  
 De, M. L., 108  
 De, P. K., 291  
 Deane, L. M., 106  
 Deane, M. P., 106  
 DeBerry, P., 56  
 Deborin, G. A., 10, 14  
 De Busk, A. G., 365, 370  
 Dechary, J. M., 105  
 Decker, T. S., 16  
 Dedonder, R., 164  
 Deep, I. W., 419  
 DeFilippes, F. M., 334  
 de Freitas, J. F. T., see  
   Teixeira de Freitas,  
   J. F.  
 De Giovanni, R., 316, 334  
 Degkwitz, R., 533  
 De Groat, A., 113  
 de Haan, P. G., see Haan,  
   P. G. de  
 Deibel, R., 62  
 Deibel, R. H., 271  
 Deicher, H., 335  
 Dekker, J., 423  
 DeLamater, J., 105  
 Delbrück, M., 27, 32, 38, 39,  
   42, 43, 321  
 Delbruck, M., 366  
 DeLeon, J. R., 107  
 DeLey, J., 151, 190  
 del Campillo, A., see  
   Campillo, A. del  
 del Ponte, E., see Ponte,  
   E. del  
 Delwiche, C. C., 212, 213,  
   215, 216, 217, 223, 229  
 Delwiche, E. A., 145  
 De Magalhães, P. S., 114  
 Demain, A. L., 264  
 De Mars, R. I., 40  
 De Melo, J. L., 66, 67  
 Demerec, M., 318, 335  
   348, 349, 350  
 Demerec, Z., 335, 348,  
   350  
 de Montgremier, H. A., see  
   Augier de Montgremier, H.  
 DeMoss, J. A., 184  
 DeMoss, R. D., 147, 148,  
   154  
 den Ende, J. V., see Van  
   den Ende, J.  
 den Hamer, C. J. A. van,  
   see Hamer, C. J. A. van  
   den  
 Dennis, E., 106  
 Denny, F. W., 94  
 Denny, F. W., Jr., 56  
 Dent, J. H., 113  
 Deutsch, R. N., 163, 166  
 der Meer, G. Van, see Van  
   der Meer, G.  
 Dern, R. J., 111  
 de Robichon-Szulmajster,  
   H., see Robichon-  
   Szulmajster, H. de  
 De Ropp, R. S., 81, 97  
 Derrick, E. H., 60  
 der Veen, J. van, see Veen,  
   J. van der  
 de Serres, F., see Serres,  
   F. de  
 de Serres, F. J., see Serres,  
   F. J. de  
 Desjardins, P. R., 18  
 de Souza, P., see Souza,  
   P. de  
 Desportes, C., 114  
 DeTurk, W. E., 204, 206  
 Dew, R. E., see Elsdon-  
   Dew, R.  
 Dewey, D. R., 509  
 de Zeeuw, D. J., see Zeeuw,  
   D. J. de  
 Diachenko, S. S., 404  
 Diadichev, N. R., 395  
 D'iakov, S. I., 392  
 Dias, E., 107  
 Díaz, M., 110  
 Dickson, J. G., 377, 482

Didenko, S. I., 403  
 Dienes, L., 17, 18, 19  
 Di Marco, G. R., 418  
 Dimitrieva, N. P., 404  
 Dineen, P. A. P., 502  
 Dingle, J. H., 49, 50, 51, 54,  
 55, 58, 59, 60, 61, 62,  
 63, 497  
 Dixon, L. F., 541  
 Doane, F., 50, 60, 61, 63  
 Dobbins, J. E., Jr., 115  
 Doberti, A., 110  
 Dobrier, I. B., 397  
 Dobzhansky, T., 357  
 Docton, F. L., 109  
 Dodge, B. O., 376  
 Dodson, R. M., 263  
 Doermann, A. H., 27, 32,  
 40, 43  
 Domaradskii, I. V., 390  
 Dong, L., 535  
 Doolittle, S. P., 422, 425  
 Dorfman, A., 163  
 Dornbush, A. C., 267  
 Dorset, M., 142  
 Doty, D. M., 508, 518  
 Doudney, C. O., 315, 316,  
 511  
 Doudoroff, M., 147, 151,  
 184, 190  
 Douglas, H. C., 252, 369  
 Dove, W. E., 112  
 Dowling, E. S., 373  
 Dowler, A. M., 435  
 Downey, M., 12  
 Drabkin, D. L., 261  
 Draganov, K. I., 385  
 Dragys, J., 267  
 Drake, R. J., 452  
 Drake, S. D., 514, 518, 521  
 Drazin, R. S., 384  
 Dreisbach, A. R., 51  
 Driscoll, C. A., 257  
 Driver, C. H., 376  
 Droop, M. R., 284, 285, 286,  
 287, 289, 295, 296, 297  
 298, 299, 300  
 Drozhevskina, M. S., 406  
 Drysdale, R. B., 366  
 Dubini, 114  
 Dubos, R. J., 77, 78, 80, 81,  
 86, 93, 98, 503  
 Dubost, S., 271  
 Dubrovskaja, I. I., 404, 405  
 Duclaux, E., 531  
 Duffey, D., 509  
 Duggan, D., 514, 515  
 Duggar, B. M., 453, 470,  
 472, 478, 479, 480, 483  
 Duke, B. O. L., 115  
 Dulaney, E. L., 207  
 Dulbecco, R., 529  
 Dunaeva, T. N., 398  
 Duncan, C. W., 161  
 Dunegan, J. C., 416, 418  
 Dunklin, E., 533, 534, 539  
 Dunn, D. B., 258

Dunn, F. W., 268  
 Dunn, M. S., 269, 271  
 Dupetit, G., 211  
 Durham, N. N., 319  
 Durrell, M. E., 473  
 Dusi, H., 291, 296, 297  
 Duthie, E. S., 497, 502  
 Dutton, G. J., 161  
 du Vigneaud, V., see Vig-  
 caud, V. du  
 Dworetzky, M., 503  
 Dye, D. W., 420  
 Dye, E. W., 417  
 Dye, M. H., 417, 434  
 Dzikhidze, E. K., 397

## E

Eagles, B. A., 181, 183, 184,  
 249  
 Eaton, M. D., 70  
 Eaton, N. R., 184  
 Eberts, F. S., 481  
 Eddington, C. W., 511  
 Eddy, A. A., 21  
 Edlinger, E., 534  
 Edmondson, W. T., 286, 295  
 Efimova, N. P., 403  
 Efimova, V. A., 405  
 Egami, F., 209, 211, 215,  
 218, 221, 223, 226  
 Eggleston, L. V., 178  
 Egorova, S. V., 394  
 Ehrensvald, G., 179  
 Eichbaum, F., 533  
 Eichhorn, A., 131  
 Eisenstark, A., 346  
 Eistrup, K., 267  
 Ekladius, L., 260  
 Ekstedt, R. D., 496  
 El-Ani, A. S., 375  
 Elberg, S. S., 86, 97  
 Elek, S. D., 493, 501  
 Elford, W. S., 543  
 Eliasson, N. A., 164  
 Elin, V. L., 389  
 Elton, G. B., 269  
 Ellenberger, C. E., 457  
 Ellis, D., 2  
 Elo, J. E., 2  
 El'piner, I. E., 387  
 Elsdon, S. R., 145-202  
 Elsdon-Dew, R., 103  
 Elvidge, J. A., 168, 170  
 Elwyn, O., 186  
 Emel'ianova, O. S., 397, 405  
 Emerson, H., 417  
 Emerson, O. H., 415  
 Emerson, S., 365, 366  
 Enders, J. F., 49, 50, 51  
 Endo, Y., 265  
 Engalycheva, A. M., 387  
 Engel, M. S., 229  
 England, B., 51, 58, 59, 63  
 Engle, H. B., 426  
 Englehard, W. E., 247  
 Engler, J. I., 50, 51, 60, 61,

63, 64  
 Englesberg, E., 317, 335,  
 353, 354, 356  
 Engley, F. B., Jr., 530, 531,  
 532, 542  
 Enright, J. B., 142  
 Entner, N., 147  
 Ephrussi, B., 310  
 Ephrussi-Taylor, H., 333,  
 334  
 Epps, W. M., 423  
 Eppstein, S. H., 263  
 Ericson, L. E., 301  
 Erkama, J., 209  
 Ermachenko, V. A., 389  
 Errera, M., 314  
 Erskine, E. B., 543  
 Ertuganova, Z. A., 401  
 Esau, K., 451  
 Esposito, R. G., 235  
 Esser, K., 376  
 Eurich, E. W., 87, 88  
 Evans, A. H., 354  
 Evans, A. S., 60, 66, 116  
 Evans, D. G., 501  
 Evans, H. J., 205, 210, 218,  
 219, 221, 223, 225, 375  
 Evans, J. B., 271, 511, 513,  
 514, 517, 521  
 Evans, M., 110  
 Evans, W. C., 145, 167, 168,  
 171, 177, 178  
 Everitt, M. G., 103  
 Evseev, V. A., 407  
 Eyles, D. E., 109  
 Eyring, E. J., 187  
 Ezekiel, D. H., 15

## F

Faber, H. K., 535  
 Faghih, M., 106  
 Fairley, J. L., 256  
 Fairley, N. H., 116  
 Falcone, G., 324  
 Fantuzzi, L. F., see Fischer-  
 Fantuzzi, L.  
 Farkas-Himsley, H., 204,  
 217  
 Farmer, V. C., 174  
 Faulkner, L. R., 487  
 Faust, E. C., 103-26; 103,  
 104, 105, 106, 107, 111,  
 112, 113, 114, 115, 117  
 Fawcett, H. S., 442  
 Fedorov, M. V., 213, 225,  
 234, 389, 394  
 Fedotina, V. L., 384  
 Feingold, D. S., 164  
 Feiber, I. M., 420  
 Feldman, H. A., 109  
 Fellows, O. N., 541  
 Felton, L. D., 81, 98  
 Feng, L. C., 114  
 Fenn, W. O., 320  
 Fergus, C. L., 430  
 Few, A. V., 4, 7

- Field, M. F., 267  
 Fildes, P., 9, 530  
 Files, V. S., 116  
 Filfus, J., 298  
 Filippovich, E. M., 387  
 Finberg, L., 69, 70  
 Fincham, J. R. S., 351, 369, 370  
 Fink, H. C., 457, 458  
 Fink, K., 256  
 Fink, R. M., 256  
 Finkelstein, R. A., 266  
 Fischer, A., 2, 4  
 Fischer, G. W., 377  
 Fischer, M., 533  
 Fischer-Fantuzzi, L., 338  
 Fisher, A. M., 496, 499, 500  
 Fisher, E., 229  
 Fisher, E. G., 221, 222  
 Fisher, H. H., 415, 419  
 Fisher, K. W., 184, 185, 345  
 Fisher, T., 229  
 Fisher, T. N., 56  
 Fitzgerald, G. P., 283, 285  
 Fjordingstad, E., 281, 282  
 Fleming, A., 533  
 Fling, M., 352, 370  
 Flock, H., 107  
 Flor, H. H., 377  
 Florentin, A., 114  
 Floyd, J., 94  
 Foard, M., 66  
 Fogg, A. H., 536  
 Fogg, G. E., 206, 291, 301, 302  
 Fogh, J., 529  
 Foghammar, S., 281  
 Folkes, J. P., 247, 248  
 Folsom, D., 443  
 Fonken, G. J., 263  
 Ford, J. E., 252, 253, 300  
 Ford, J. H., 417  
 Formal, S. B., 339  
 Forro, F., Jr., 323  
 Forssell, P., 55, 60, 61, 64  
 Forsyth, P. J., 56  
 Foster, F. L., 509  
 Foster, J. W., 10, 179, 183, 192, 259, 260  
 Foster, L. E., 81, 96  
 Foster, S. M., 149, 151  
 Fowle, A. M. C., 62  
 Fox, M. S., 317, 328, 330, 333  
 Fox, V. L., 55  
 Fraenkel-Conrat, H. L., 540  
 Francis, T., Jr., 49, 50, 51, 528  
 Franke, W., 181  
 Franklin, A. L., 296  
 Franklin, R., 78  
 Fraser, D., 5, 6, 8, 11, 34, 35, 347  
 Fraser, M. J., 4, 7  
 Fraunce, F., 97  
 Frazier, N. W., 462  
 Frear, D. S., 226, 234, 270  
 Freeman, B. M., 504  
 Freidman, M., 56, 58  
 Freitas, J. F. T. de, see Teixeira de Freitas, J. F.  
 French, D., 164  
 French, R. C., 270  
 Frenkel, J. F., 110  
 Freundt, E. A., 18  
 Fridlund, P. R., 459  
 Fried, J., 263  
 Friedl, J. L., 541  
 Friend, J. E., 433, 434  
 Fromberg, H., 533  
 Frye, W. W., 103, 105, 106  
 Fuchs, A. R., 250, 255  
 Fuerst, C. R., 33, 38, 322, 344  
 Fujikawa, K., 5, 8  
 Fujiwara, A., 222  
 Fukai, K., 67  
 Fukui, G. M., 95  
 Fukumi, H., 66  
 Fuld, G. J., 512, 513  
 Fülleborn, F., 112, 113  
 Fuller, R., 84, 97  
 Fulmer, E. I., 267  
 Fulton, J. D., 108  
 Fulton, R. W., 457, 459, 460  
 Furness, G., 341, 342, 358  
 Fusillo, M. H., 499
- G
- Gaby, W. L., 262  
 Gaden, E. J., Jr., 518, 521  
 Gafford, R. D., 167, 168, 170  
 Gaither, N., 314  
 Galaev, I. V., 388, 391  
 Gale, A. J., 509  
 Gale, E. F., 247, 248, 258, 260, 535, 536  
 Gallicchio, V., 117  
 Gallop, R. C., 79, 87, 88, 90, 91, 92  
 Galloway, B., 162  
 Gal'perin, E. A., 399  
 Gambogi, P., 431  
 Ganapathi, K., 264  
 Ganzburg, S. E., 399  
 Garber, E. D., 78  
 Garbowski, L., 2  
 Garcia-Laverde, A., 114  
 Gardash'ian, A. M., 403  
 Gardner, F. E., 453  
 Gardner, I. C., 237  
 Gardner, P. S., 66, 67  
 Garen, A., 29, 42, 344  
 Garner, G. B., 226  
 Garnham, P. C. C., 108, 111  
 Garnjobst, L., 372  
 Garvie, E. L., 527  
 Gary, N. D., 165  
 Gattani, M. L., 429  
 Gauld, R. L., 51, 52, 59, 65, 539  
 Gäumann, E., 302  
 Gausmanova, I., 405  
 Gautheret, R. J., 472, 473, 484  
 Gauze, G. F., 393, 394  
 Gavin, J. J., 271  
 Gavrilova, L. P., 388  
 Gayon, V., 211  
 Gedz', S. M., 398  
 Geiman, Q. M., 105  
 Gekker, V. D., 397  
 Gelman, N. S., 4, 7, 10, 14, 390  
 Genny, A. T., 493  
 Gentles, M. J., 263  
 Georgi, C. E., 16, 165, 166  
 Georgopoulos, G., 112  
 Geppert, J., 526, 531  
 Gerhardt, P., 3, 4, 6, 7, 10, 17  
 Gerloff, G. C., 283, 285, 300  
 Gerngross, O. B., 66  
 Gerschman, R., 320  
 Gershenfeld, L., 537  
 Gershenzon, S. M., 384, 385  
 Gerth, R., 110  
 Gesser, G. A., 533  
 Gest, H., 148, 188, 189, 230, 231, 233  
 Ghiretti, F., 179  
 Ghose, N., 114  
 Gibbs, M., 147, 148, 149, 164  
 Gibbs, M. H., 262  
 Gibor, A., 296  
 Gibson, C. L., 109  
 Giddings, N. J., 451  
 Giese, A. C., 526  
 Giese, A. M., 314  
 Gilbert, D. L., 320  
 Gilby, A. R., 4, 7  
 Gilder, H., 210  
 Giles, N., 367, 369  
 Giles, N. H., 367, 369, 374  
 Giles, N. H., Jr., 319, 320, 352  
 Gilmer, R. M., 417, 455, 457, 459  
 Gilmore, L. K., 50, 53, 64  
 Ginoza, Y. W., 530  
 Ginsberg, A., 148  
 Ginsberg, H. S., 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 541  
 Ginzburg, T. S., 393  
 Girard, G., 96, 97  
 Girdardt, N., 370  
 Gladstone, G. P., 9, 92  
 Glander, R. von, 61, 64  
 Glaser, L., 158, 159, 162, 163, 264  
 Glasgow, H., 456  
 Glass, B., 204, 365, 368  
 Glenn, J. L., 153, 236  
 Glick, M. C., 209  
 Glover, J., 263  
 Glover, S. W., 318  
 Glover, W. O., 456  
 Gnevysheva, E. F., 405

- Gnorizova, V. M., 68  
 Goldman, G. C., 56, 57, 58  
 Goebel, W. F., 29, 35  
 Goetz, A., 533, 534  
 Gold, A. M., 263  
 Gold, E., 50, 53, 54, 59, 60, 61, 62, 63  
 Gold, K., 297  
 Goldberg, E. D., 288  
 Goldberg, M. K., 253  
 Goldblith, S. A., 508, 509, 510, 512, 513, 517, 518, 519, 521, 522  
 Golden, F., 535  
 Goldkamp, A. H., 263  
 Goldman, M., 105  
 Gol'farb, D. M., 406  
 Gollub, E. G., 355  
 Golueke, C. G., 250  
 Gomberg, H. J., 520  
 Gonin, S. L., 403  
 Gönner, R., 116  
 Gonzalez, J. O., see Oliver-Gonzalez, J.  
 Goodgal, S. H., 320, 327, 330, 333, 335  
 Goodman, R. N., 416, 417, 432, 435  
 Goodpasture, E. W., 50, 63  
 Goodwin, T. W., 254, 262  
 Goos, J. J. C., 212  
 Gopalkrishnan, K. S., 425  
 Gorbunova, A. S., 66  
 Gordienko, A. N., 407, 408  
 Gordon, H. A., 103  
 Gordon, M. A., 270, 325  
 Gordon, R. M., 115  
 Gorini, L., 261  
 Gortner, R. A., 442  
 Goto, O., 265  
 Gots, J. S., 269, 355, 356  
 Gottlieb, D., 416, 425  
 Gould, J. C., 503  
 Gould, S. E., 520  
 Gowdridge, B. M., 373  
 Grabar, P., 383-414  
 Grabowich, P., 263  
 Grace, J. B. B., see Baumann-Grace, J. B.  
 Graham, A. F., 32  
 Graikoski, J. T., 517  
 Grainge, E. B., 108  
 Granick, S., 210  
 Gray, C. T., 83, 86, 152, 153, 236  
 Gray, M. L., 141, 535  
 Gray, P. H., 173  
 Gray, R., 417  
 Gray, R. A., 420, 431, 433  
 Grayston, J. T., 53, 54, 55, 58, 60  
 Greathouse, G. A., 156, 157, 158, 159, 264  
 Greaves-Walker, W. J., 543  
 Green, H. N., 95  
 Green, J. A., 353  
 Green, M., 256  
 Green, S., 334  
 Greenberg, J., 104  
 Greene, R. C., 268  
 Greenfield, S. S., 287  
 Greenspan, G., 263  
 Greenway, D., 103  
 Greer, S., 334  
 Greeson, C. E., 543  
 Gregory, K., 430  
 Gregory, M. E., 252  
 Griffith, C. L., 542  
 Griffith, J. S., 350  
 Griffiths, M., 356  
 Grimes, R. W., 161  
 Grindlay, J. H., 532  
 Groman, N. B., 339  
 Gromet, Z., 157, 158, 159, 160  
 Groot, H., 107  
 Gross, P. M., 541  
 Gross, S. R., 167, 168, 170, 356, 365, 370  
 Grossman, E. J., 106  
 Grosso, J., 426  
 Grosso, J. J., 426  
 Groth, D. P., 13  
 Grove, J. F., 433  
 Grover, A. A., 535  
 Grubeshova, M., 402  
 Grummer, G., 421  
 Gubarev, E. M., 388, 391  
 Guengerich, H. W., 462  
 Guest, H. L., 533  
 Guex-Holzer, S., 2, 3, 6, 11  
 Guha, A., 108  
 Guild, W. R., 334  
 Guirard, B. M., 247-78  
 Gump, W. S., 536, 537  
 Gundersen, K., 228, 229  
 Gunsalus, I. C., 147, 148, 150, 154, 164, 181, 183, 249  
 Gunter, S. E., 510, 511  
 Gurevich, R. M., 398  
 Gurin, S., 178  
 Gurvich, A. E., 402, 406  
 Guss, C. O., 535  
 Gustafson, P. V., 108  
 Guthrie, R., 272  
 Gutsche, A., 480  
 Gylybov, K. C., 405  
 György, P., 113, 254

## H

- Haan, P. G. de, 149  
 Haas, F. L., 315, 316  
 Hachisuka, Y., 267  
 Hacker, R. G., 428  
 Hackett, J., 78  
 Hadfield, W. A., 537  
 Hadley, C., 262  
 Hagan, W. A., 127-44  
 Hagborg, W. A. F., 428  
 Häggman, J., 209  
 Hahn, E., 326, 334, 357  
 Hahn, F. E., 5, 10, 18, 20, 259  
 Haines, R. B., 543  
 Hakala, M. T., 252  
 Hakansson, E. G., 103  
 Haldane, J. B. S., 370  
 Hale, J. H., 495, 496  
 Hales, N. B., 499  
 Hall, L. A., 542  
 Hall, L. M., 207  
 Hall, N. S., 219  
 Hall, R. P., 289  
 Halliwell, G., 160, 161  
 Hallman, F. A., 105, 492  
 Hallman, N., 110  
 Halse, G. R., 293  
 Halvorson, H. O., 146, 270  
 Ham, G. P., 534  
 Hamer, C. J. A. van den, 149  
 Hamilton, J. M., 417, 418  
 Hamilton, P. B., 230, 231, 237  
 Hamlin, A., 52, 56, 57  
 Hammarsten, E., 164  
 Hammer, C. L., 420  
 Hammerle, O. A., 513  
 Hampton, J. E., 418  
 Hanabusa, J., 62, 65  
 Hanby, W. E., 81  
 Hanks, J. H., 83, 86  
 Hanna, L., 51, 61, 62, 63  
 Hannan, R. S., 508, 509, 520  
 Hanotier, J., 4, 10, 14  
 Hansen, O. H., see Holm-Hansen, O.  
 Hansen, R. W., 212  
 Hanson, E. D., 310  
 Hantover, M. J., 51, 65  
 Hapgood, F. C., 170, 183  
 Harboe, A., 109  
 Hardin, G., 303  
 Hardwick, W. A., 10  
 Hardy, A. V., 103  
 Harein, P. K., 165  
 Harford, C. G., 52, 56, 57  
 Harinasuta, C., 104  
 Harnack, G. A., 61, 64  
 Harper, E. M., 162  
 Harper, G. J., 493  
 Harrar, J. G., 377  
 Harray, I., 167  
 Harris, C. H. S., see Stuart-Harris, C. H.  
 Harris, F. A., Jr., 533  
 Harris, H., 163, 357  
 Harris, M., 156, 157  
 Harris, R. V., 462  
 Harris, S. T., 160  
 Harris-Smith, P. W., 78, 79, 82, 84, 85, 88, 89, 90, 91, 92, 93  
 Hart, H., 427  
 Hartley, J. W., 51, 52, 53, 55, 56, 61, 65  
 Hartman, F. W., 544  
 Hartman, P. E., 153, 236, 324, 348, 349, 350  
 Hartman, R. E., 258  
 Hartman, Z., 319, 346, 350  
 Harvey, H. W., 212, 266, 288, 290, 294



- Hashida, W., 265  
 Hashimoto, K., 327  
 Hashimoto, Y., 301  
 Haskins, C. P., 288  
 Hassid, W. Z., 148  
 Hattori, A., 223  
 Hauer, A., 106  
 Hauge, J. G., 189  
 Hauser, G., 166, 186, 264  
 Havlík, O., 109  
 Hawk, E. A., 542  
 Hawthorne, D. C., 372  
 Haxo, F. T., 297  
 Hayaishi, O., 167, 171, 190, 213, 260  
 Hayashi, S., 66, 67  
 Hayes, W., 184, 340, 341, 343, 345  
 Heath, E. C., 148, 166  
 Heckly, R. J., 82, 88, 89, 90, 91  
 Hedberg, M. A., 92  
 Heep, D. M., 415, 417  
 Heggested, H. E., 425, 426  
 Heilbrunn, L., 103  
 Heinmetz, F., 527  
 Heinrich, H. C., 298  
 Heiss, J., 533  
 Hellbrugge, T., 109  
 Helper, A., 502  
 Hemming, H. G., 415  
 Hemphill, D. D., 432  
 Hemphill, F. M., 528  
 Henderson, J. H. M., 473  
 Henderson, K., 35  
 Henderson, M. E. K., 174, 176  
 Henderson, R. B., 256  
 Henderson, R. G., 448  
 Hendricks, J. R., 117  
 Henis, D. B., 262  
 Henis, Y., 164  
 Henley, E. J., 518, 521  
 Henning, M. W., 130  
 Henriksson, E., 291  
 Henry, A. W., 428  
 Henson, E. V., 543  
 Heppel, L. A., 239  
 Herick, W. van, 70  
 Hernandez, M. G., 191  
 Hernández, T., 111  
 Herrero, A., 106  
 Herriott, R. M., 27, 35, 320, 327, 330, 333, 335  
 Herrmann, A., 534  
 Herrmann, R. L., 256  
 Herberg, E. B., 263  
 Hershey, A. D., 27, 30, 31, 36, 37, 38, 39, 41, 42, 43, 44  
 Hervey, A., 297, 301, 471, 486  
 Hervey, G. E. R., 422  
 Herzberg, K., 533  
 Herzog, H. L., 263  
 Hess, V. F., 258  
 Hestrin, S., 155, 156, 157, 158, 159, 160, 164  
 Heuberger, J. W., 416, 421, 425  
 Heussleman, B., 267  
 Hewitt, E. J., 221, 222  
 Hewlett, N. T., 87, 88  
 Heyl, J. T., 70  
 Heym, G. A., 187  
 Heyningen, W. E. van, 98  
 Hezebeck, M. M., 497  
 Hiai, S., 231  
 Hickman, M. L. W., 103  
 Hidaka, Z., 434  
 Higgins, E. S., 222, 228  
 Hijmans, M. D., 18  
 Hildebrand, E. M., 441-68; 448, 449, 454, 455, 456, 457, 458, 463  
 Hildebrandt, A. C., 469-90; 470, 472, 476, 477, 479, 480, 481, 482, 483, 485, 486, 487  
 Hildreth, R., 419  
 Hildreth, R. C., 419  
 Hilker, D. M., 105  
 Hillary, E. B., 249  
 Hillary, E. P., 181, 183  
 Hilleman, M. R., 49, 50, 51, 52, 53, 55, 58, 59, 63, 64, 65  
 Hillier, J., 1, 18  
 Hillman, M. J., 272  
 Hills, G. M., 270  
 Himsley, H. F., see Parkas-Himsley, H.  
 Hinchliffe, M. C., 117  
 Hino, S., 231, 234  
 Hirasawa, N., 67  
 Hirota, Y., 342  
 Hirsch, J. G., 8  
 Hirsch, M. L., 268  
 Hirth, L., 485  
 Hitchborn, J. H., 459  
 Hitchcock, D. J., 103  
 Hitchens, A. P., 443  
 Hitchings, G. H., 269  
 Hitzman, D. O., 270  
 Hoagland, M. B., 253  
 Hoare, C. A., 103, 106, 107  
 Hoare, D. S., 5, 9, 10, 271  
 Hobart, O. F., 457, 459  
 Hoch, G. E., 231  
 Hockey, J. F., 462  
 Hockwald, R. S., 111  
 Hodgson, B., 183  
 Hodgson, R., 532  
 Hodgson, W. A., 424  
 Hoeft, G. L., 106  
 Hoekenga, M., 106  
 Hoff-Jorgensen, E., 267, 272  
 Hoffman, R. K., 534  
 Hoffman, T., 229  
 Hoffmann, C. E., 267, 296  
 Hofmann, K., 262  
 Hofmeyer, J. D. J., 452  
 Hofstad, M. S., 541  
 Hogan, M. J., 64  
 Hogstrom, G., 179  
 Holbert, J. R., 482  
 Holden, J. T., 271  
 Holdsworth, E. S., 252, 253  
 Hollaender, A., 511, 512  
 Holliday, R., 375  
 Holloway, B. W., 372  
 Holman, H. R., 335  
 Holman, J., 271  
 Holme, T., 164, 165  
 Holmes, F. O., 442, 443, 448, 450  
 Holmes, F. W., 430  
 Holm-Hansen, O., 300  
 Holt, S. J., 86  
 Holton, C. S., 377  
 Holzaepfel, J. H., 58  
 Holzer, S. G., see Guex-Holzer, S.  
 Hope Simpson, R. E., 67  
 Höpken, W., 18  
 Hoppert, C. A., 161  
 Hopps, H. E., 259  
 Horecker, B. L., 146, 148, 184  
 Horner, C. E., 429, 435  
 Horowitz, N. H., 352, 370  
 Horsfall, F. L., 70  
 Horvath, A., 269  
 Hosoda, J., 8  
 Hotchkiss, R. D., 312, 326, 327, 328, 330, 331, 332, 354, 355  
 Hotson, H. H., 486  
 Houck, U. G., 130  
 Housain, I., 250  
 Houwink, A. L., 1  
 Hovenkamp, H. G., 153, 236  
 Howard, B. H., 163, 166  
 Howard, F. L., 428  
 Howard, J. G., 504  
 Howard, R. B., 165  
 Howe, C., 52, 56, 57, 58  
 Howe, H. B., Jr., 371  
 Howie, J. W., 77  
 Hoyem, H. M., 105  
 Hoyt, A., 535  
 Hrenoff, A. K., 104  
 Hsiang, Y. W., 221  
 Hsü, H. F., 115, 116, 117  
 Hsü, S. Y. Li, 116  
 Huang, J. S., 58  
 Hubendick, B., 117  
 Huber, O., 18  
 Huber, W., 508  
 Hucker, G. J., 535  
 Huddleson, F. I., 97  
 Huebner, R. J., 49-76; 49, 50, 51, 52, 53, 54, 55, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69  
 Huertos, M. R., see Rubio Huertos, M.  
 Huff, J. W., 262  
 Hufnagel, C. A., 542  
 Hug, D. H., 189  
 Hughes, D. T., 375  
 Hughes, J. P., 366



Hughes, W. A., 461  
 Hughes, W. H., 270  
 Hughes, W. L., 321  
 Hughes, W. L., Jr., 323  
 Hull, R. N., 51, 56  
 Human, M. L., 338  
 Humgate, R. E., 160  
 Humphreys, T. W., 222, 251  
 Hunt, G. A., 530  
 Hunter, G. D., 6, 10  
 Hunter, G. W., III, 112, 113, 117  
 Huppert, J., 5, 8  
 Hurst, R. R., 423  
 Hurwitz, J., 148  
 Hussey, K. L., 105  
 Hutchings, B. L., 267  
 Hutchins, L. M., 458  
 Hutchinson, F., 510  
 Hutchinson, G. E., 290, 292, 300  
 Hutner, S. H., 251, 253, 285, 288, 289, 290, 296, 297, 298, 299, 300, 310  
 Hyadon, D. A., 536  
 Hyatt, M. T., 270  
 Hyre, R. A., 421

I

Iakhno, M. A., 405  
 Iamshchikov, V. P., 386  
 Ichihashi, Y., 66  
 Ichikawa, S., 5, 8  
 Ichioka, P. S., 222  
 Iino, T., 355, 356  
 Iina, T. K., 225  
 Imamaliyev, S. A., 399  
 Imboden, C. A., 106  
 Imshenetskii, A. A., 230, 233  
 Ingraham, J. L., 167, 168  
 Ingraham, L., 356  
 Ingram, M., 543  
 Inogamov, A. B., 387  
 Ioffe, V. I., 403  
 Irminger, H. F., 542  
 Isaacs, M. L., 531  
 Ishai, R. B., see Ben-Ishai, R.  
 Ishida, N., 66, 67  
 Ishihara, S. J., 421, 425  
 Ishikawa, T., 375  
 Ishimoto, M., 227  
 Ishitani, C., 374  
 Isolatovskaia, M. V., 404  
 Iterson, W. van, 1  
 Ito, N., 66  
 Iurkov, I. A., 396  
 Iverson, R. M., 314, 526  
 Iwanowski, D., 443  
 Iwasaki, H., 217

J

Jaag, O., 302  
 Jachowski, L. A., 115  
 Jachowski, L. A., Jr., 115

Jackson, A. W., 495  
 Jackson, L. W. R., 442  
 Jacob, F., 27, 33, 42, 43, 44, 45, 337, 338, 340, 341, 342, 343, 344  
 Jacobs, L., 104, 108, 109, 110  
 Jacobs, S. E., 536  
 Jacobson, K. D., 542  
 Jacoby, J., 114  
 Jacquot, C., 487  
 Jaffurs, W. J., 499  
 Jagger, J., 320  
 Jakob, H., 302  
 Jakob, W. B., 190  
 James, A. P., 373, 374  
 Jameson, E. L., 541, 542  
 Janssen, W. A., 95  
 Jansson, E., 55  
 Jarvis, F. G., 166  
 Jawetz, E., 51, 61, 62, 63, 79  
 Jaysuriya, G. C. N., 184  
 Jebb, W. H. H., 251, 265  
 Jefferson, W. E., 179, 183  
 Jeffery, G. M., 111  
 Jenkins, A. R., 108  
 Jensen, A. D. O., see Orla-Jensen, A. D.  
 Jensen, H. L., 177, 228, 255  
 Jensen, J., 261  
 Jensen, K. A., 319  
 Jensen, K. E., 67  
 Jensen, S. O., see Orla-Jensen, S.  
 Jensen, V., 237  
 Jerne, N. K., 39  
 Jesaitis, M. A., 29, 35  
 Jeynes, M. H., 5, 11  
 Jinks, L. L., 342  
 Jirovek, O., 110  
 Jo, K., 66  
 Joe, L. K., see Lie, Kian Joe  
 Johann, H., 482  
 Johns, A. T., 179  
 Johnson, J., 443, 453  
 Johnson, M. J., 20, 166  
 Johnson, R. E., 98  
 Johnson, V. M., 114  
 Johnson, W. H., 296, 299  
 Johnston, P. B., 54, 55, 60  
 Johnston, R., 301  
 Johnstone, H. G., 106  
 Jones, E. S., 111  
 Jones, F., 105  
 Jones, F. E., 109  
 Jones, G. W., 543  
 Jones, J., 114  
 Jones, J. D., 171  
 Jones, L. K., 444  
 Jones, M. E., 181, 301  
 Jones, M. F., 115  
 Jones, W. R., 104  
 Jordan, E. M., 33, 35  
 Jordan, R. C., 536  
 Jordan, W. S., Jr., 50, 51, 53, 54, 55, 58, 59, 60, 61, 62,

63, 98  
 Jordon, R. T., 519  
 Jørgensen, E. H., see Hoff-Jørgensen, E.  
 Jose, A. G., 232  
 Josephson, E. S., 104  
 Joslin, R. P., 520  
 Josten, J. J., 236  
 Josten, J. L., 153  
 Judd, A. W., 141  
 Judis, J., 230, 231, 233  
 Jukes, T. H., 267, 296  
 Juliano, S., 114  
 Julita, P., 253  
 Jump, J. A., 425  
 Jung, R. C., 104, 106  
 Jungheer, E., 66  
 Juni, E., 187  
 Ju-Shan, L., see Lu Ju-Shan

K

Kabler, P., 534  
 Kabler, P. W., 52, 527  
 Kafanova, N. D., 393  
 Kafer, E., 369  
 Kagan, I. G., 116  
 Kainski, J., 420  
 Kaiser, A. D., 42, 45  
 Kakimoto, D., 300  
 Kalinenko, V. O., 389  
 Kalinin, B. I., 402  
 Kalininskaya, T. A., 234  
 Kallie, K., 287  
 Kallio, R. E., 212  
 Kamen, M. D., 214  
 Kamen, N. E., see Niedergang-Kamien, E.  
 Kaminski, Z. C., 262  
 Kan, B., 510, 517  
 Kanazawa, A., 300  
 Kanazir, D., 313  
 Kandler, G., 18  
 Kandler, O., 18  
 Kaneko, T., 265  
 Kantarovich, R. A., 384  
 Kapikian, A. Z., 49, 66, 67, 68, 69  
 Kapitsa, O. S., 385  
 Kaplan, N. O., 152, 214  
 Kaplan, R. W., 374  
 Kapul, N. M., 384  
 Kapustiak, S. I., 401  
 Karel, M., 510  
 Karibian, D., 166, 186  
 Karnovsky, M. L., 166, 186, 264  
 Karpuzidi, K. S., 406  
 Kasatkina, G. V., 407  
 Kasatkina, I. L., 396  
 Kashiba, S., 5, 8  
 Kashiwada, K., 300  
 Kashkin, K. P., 386  
 Kassanis, B., 486  
 Katagiri, M., 167, 171, 190, 213

- Kathan, R. H., 527  
 Kato, H., 266  
 Kato, K., 67  
 Kato, N., 267  
 Katsitadze, V. A., 396, 404  
 Katz, S., 50, 51, 55, 58, 59, 61, 63  
 Katznelson, H., 416  
 Kaudewitz, F., 349  
 Kaufman, M. J., 429  
 Kawagoe, K., 300  
 Kaye, S., 540, 541, 542, 543  
 Keeler, R. F., 234, 235, 255  
 Kefauver, M., 213  
 Kegeles, G., 82, 88, 91  
 Keilin, J., 224  
 Keitt, G. W., 372, 377, 416, 425, 428, 457, 458  
 Kellenberger, E., 5, 10, 17, 29, 30, 34, 35, 36, 40  
 Keller, J. R., 462  
 Kelliher, M. G., 509  
 Kelly, A. R., 544  
 Kelly, B., 51, 53, 54, 63, 64, 65  
 Kelner, A., 320, 508, 511, 512, 526, 527  
 Kellaway, C. H., 492  
 Kempe, L. L., 512, 514, 516, 517, 519  
 Kendall, E. J. C., 60, 61, 64  
 Kendrick, E. L., 377  
 Kennedy, R. E., 543  
 Kent, L. H., 163  
 Keppie, J., 79, 82, 83, 84, 87, 88, 89, 90, 91, 92, 95, 96, 97  
 Kerby, G. P., 502  
 Kershaw, W. E., 115  
 Kessel, J. F., 103  
 Kessler, E., 225  
 Keur, J. Y., 461  
 Key, A., 170, 183  
 Keyworth, W. G., 461  
 Khalil, M., 115  
 Khomiakov, A. M., 403  
 Khomik, S. R., 397  
 Khristov, A. C., 405  
 Khudairi, A. K., 238  
 Kian Joe Lie, see Lie, Kian Joe  
 Kienholz, J. R., 416  
 Kiese, M., 228  
 Kihara, H., 267  
 Kilborne, F. L., 136  
 Kilby, B. A., 170  
 Kilham, L., 66  
 Killisch, L., 18  
 Kimball, A. W., 373  
 Kimball, R. F., 314, 508  
 Kimura, S., 62  
 Kimura, S. J., 51, 61, 62, 63  
 Kinder, E., 108  
 King, C. G., 287  
 King, H. K., 88, 260  
 King, J. D., 535  
 King, J. H., 542, 543  
 King, M. E., 462  
 King, T. W., 153, 154, 187, 267  
 Kinsky, S. C., 220  
 Kirby, R. S., 416  
 Kirby, W. A., 426  
 Kirby-Smith, J. L., 112  
 Kirchner, C., 346  
 Kiritani, K., 318  
 Kirk, I., 319  
 Kirmse, T., 110  
 Kirn, J. F., 517  
 Kistiakowsky, G. B., 533  
 Kitahara, K., 265  
 Kitaoba, M., 66  
 Kitay, E., 266, 267  
 Kitayama, T., 66  
 Kitch, B. B., 149, 164  
 Kitching, J. A., 281  
 Kitiyakara, A., 351  
 Kivela, E., 535  
 Klizer, D. E., 251  
 Kjellen, L., 51, 52, 54, 55, 56, 57, 58, 61, 64  
 Klarenbeek, A., 541  
 Klarmann, E. G., 536, 539  
 Klausmeier, R. E., 165, 173, 226  
 Kleiger, B., 492  
 Klein, H. P., 184  
 Klein, R., 229  
 Klein, R. M., 479, 480  
 Kleinschmidt, A., 108  
 Klemmer, H. W., 418, 482, 483  
 Kliachko, N. S., 406  
 Kleneberger-Nobel, E., 17, 18  
 Klieve, H., 533, 534  
 Kline, E. S., 355  
 Klinskowski, M., 419, 428  
 Kloetzel, M. C., 535  
 Klomparsen, W., 418  
 Klotter, H. E., 282  
 Klungsbyr, L., 153  
 Kluyver, A. J., 208, 211, 212, 215, 216, 217, 223, 237  
 Knaysi, G., 2  
 Knivett, V. A., 155  
 Knizhnikov, V. A., 396  
 Knorr, L. C., 462  
 Knowlton, J. A., 509  
 Knox, J. M., 112  
 Knox, W. E., 535  
 Koch, G., 28, 29, 30, 31, 32, 33, 34, 35, 36  
 Koch, K. L., 444  
 Kodicek, E., 263  
 Koehler, B., 461  
 Kogut, M., 181  
 Koh, W. Y., 514, 521  
 Kohler, H., 419  
 Kohler, E., 449  
 Kohn, H., 511  
 Kojevnikov, P. V., 106  
 Kok, G., 54, 58, 63  
 Kokurichev, P. I., 398  
 Kolb, R. W., 541, 543  
 Kolchins'ka, I. D., 390  
 Kolesnik, Z. A., 395  
 Kolesnikov, G. F., 400  
 Kålmark, G., 319, 374  
 Komarovskiy, B., 281  
 Kon, S. K., 253  
 Kondrat'eva, V. F., 386  
 Konikova, A. S., 402  
 Konishi, C., 237  
 Koniusch, O. V., 406  
 Kono, M., 226  
 Konosh, O. V., 388  
 Konovaltchikoff-Mazoyer, M., 224  
 Konrich, F., 534  
 Kopech, G., 469  
 Kopytovskaia, L. P., 403  
 Korkes, S., 179  
 Kornberg, A., 179, 257  
 Kornberg, H. L., 155, 181, 182, 183, 248, 249, 258, 259  
 Korns, R. F., 106, 528  
 Korobkova, E. I., 405  
 Korosteleva, V. S., 403  
 Korotiaev, A. I., 393  
 Korzenovskiy, M., 538  
 Koser, S. A., 251  
 Kosiaikov, P. N., 403  
 Kotlán, S., 114  
 Kovalevskii, M. F., 403  
 Kozloff, L. M., 31, 34, 35, 39  
 Kozlovskaya, L. A., 402  
 Kozulitsina, T. I., 398  
 Krakow, G., 180  
 Krampitz, L. O., 179, 184, 190, 191  
 Krasil'nikov, N. A., 392, 393  
 Krasna, A. I., 224, 228, 253  
 Kratz, W., 285  
 Kratz, W. A., 237  
 Krause, G. A., 533, 534  
 Krauss, M., 328  
 Krauss, M. R., 326, 357  
 Kravitz, E., 535  
 Kraybill, H. R., 518  
 Krebs, H. A., 155, 178, 182, 183, 248  
 Kreh, U., 528  
 Kridl, A. G., 533  
 Kriss, A. E., 394  
 Krog, A. J., 535  
 Kriukova, I. N., 400, 401  
 Krumholz, L. A., 288, 294  
 Krupka, L. R., 425  
 Krupp, I. M., 104  
 Kruse, K., 533  
 Kucera, S., 255  
 Kucherova, N. T., 398  
 Kuchinskas, E. J., 269  
 Kulagin, S. M., 399  
 Kulescha, Z., 472  
 Kumagai, T., 66, 67

- Kummerow, F. A., 270  
 Kun, E., 105, 191  
 Kuna, A., 503  
 Kunkel, H. G., 335  
 Kunkel, L. O., 442  
 Kuntz, J. E., 430  
 Kuntz, R. E., 115, 116, 117  
 Kupferberg, L. L., 165  
 Kurahashi, K., 179, 355  
 Kurek, L. I., 353, 369  
 Kuritsina, N. M., 384  
 Kuroya, M., 66, 67, 533  
 Kurtzman, R., 486  
 Kustoff, T. Y., 267  
 Kutsky, R., 486  
 Kuznetsova, N. I., 403  
 Kuznetsova, V. A., 395  
 Kvestadze, I. F., 402  
 Kylin, A., 288  
 Kylin, H., 288
- L
- Lacey, R. J., 117  
 Lack, C. H., 496, 499, 500, 504  
 Lackey, C. F., 442, 451  
 Lafferty, J. W., 113  
 Lagermalm, G., 52, 56, 57, 58  
 Laing, A. B. G., 111  
 Laki, K., 533  
 Lamanna, C., 531  
 Lambert, J., 536  
 Lambina, V. A., 394  
 Lampen, J. O., 148  
 Landman, O., 15  
 Landman, O. E., 6, 10, 15  
 Lang, D. A., 510  
 Lankford, C. E., 266, 267  
 Lannon, T. J., 167  
 Lapinleimu, K., 55, 60, 61, 64  
 la Rivière, J. W. M., see Rivière, J. W. M. la  
 Lark, K. G., 324  
 Lascelles, J., 210  
 Laskowski, W., 375  
 Lasserre, C. T., see Tournier-Lasserre, C.  
 Lataret, R., 320, 334  
 Latyshev, N. I., 106  
 Laurent, T., 164  
 LaVeck, G. D., 504  
 Laverde, A. G., see Garcia-Laverde, A.  
 Lawless, D. K., 105  
 Lawrence, C. A., 535  
 Lawrence, J. J., 115  
 Lawton, E. J., 510  
 Lawton, W. D., 95  
 Layne, E. C., 236  
 Lazarev, N. V., 395  
 Lea, D. E., 510  
 Leat, W. M. F., 263  
 Leben, C., 416, 425, 428, 431
- Lebovitz, J. L., 497  
 Lederberg, E. M., 336, 350, 355  
 Lederberg, J., 5, 10, 11, 17, 18, 19, 20, 34, 36, 43, 311, 324, 335, 336, 340, 341, 342, 344, 347, 350, 355, 356, 370, 371  
 Ledingham, G. A., 486, 487  
 Lee, H. H., 32, 33  
 Lee, S. B., 231  
 Lees, H., 229  
 Lee-Whiting, B., 369  
 Lefèvre, M., 302  
 Le Gac, P., 115  
 Lehman, J. J., 527  
 Leidy, G., 326, 334, 357  
 Leloir, L. F., 161, 264  
 Lelong, M., 50, 63  
 Lemaigre, C., 115  
 Le Minor, L., 340  
 Le Minor, S., 340  
 Lemon, H. M., 539  
 Lenhoff, H. M., 214  
 Lennette, E. H., 51, 55, 58, 59, 63  
 Lennox, E. S., 45  
 Lepine, P., 50, 57, 63  
 Lepow, I. H., 111  
 Lerman, L. S., 330, 333  
 Lerner, P., 354  
 LeRoux, P. M., 377  
 Lester, G., 353  
 Lester, W., Jr., 539  
 Leuchtenberger, C., 54, 56, 57  
 Leupold, U., 366, 367, 372  
 Le-Van Phung, 114  
 Levashev, V. S., 388  
 Levi, L., 494  
 Levin, D. H., 269  
 Levine, M., 44, 337  
 Levinson, H. S., 270  
 Levinthal, C., 39, 41, 42, 43, 322  
 Levkovich, E. N., 400  
 Levy, E., 493  
 Levy, H. B., 56  
 Lewin, J. C., 286, 298  
 Lewin, R. A., 296, 299, 300, 302  
 Lewis, G. B., 352  
 Lewis, G. J., 288  
 Lewis, I. M., 266  
 Lewis, J. C., 267  
 Lewis, L., 301  
 Lewis, L. J., 528  
 Lewis, R., 103  
 Li, K., 357  
 Li, T. K., 15  
 Lialikova, N. N., 394  
 Liberman, M., 56  
 Licciardello, J. J., 518, 521  
 Lichstein, H. C., 267  
 Lichtenstein, J., 256  
 Lida, K., 221
- Lidwell, O. M., 539  
 Lie, Kian Joe, 114  
 Lieb, F., 533  
 Lieb, M., 337  
 Lieberman, K., 5, 10, 17  
 Lieske, R., 212  
 Limasset, P., 485  
 Lincicome, D. R., 105  
 Lindeberg, G., 164  
 Lindegren, C. C., 366, 368, 371, 372, 373  
 Lindegren, G., 366, 368, 372, 373  
 Lindenmeyer, J., 534  
 Lineweaver, H., 520  
 Link, K. P., 482  
 Linstead, R. P., 168, 170  
 Lipkin, M. E., 404  
 Lipmann, F., 179, 181  
 Lippelt, H., 61, 64  
 Lister, C. A., 461  
 Litman, R. M., 316  
 Little, H. N., 228, 231  
 Little, R. M., 495  
 Liu, C., 70  
 Liu, G. B., 15  
 Livadas, G. A., 112  
 Lloyd, P. J., 421  
 Lloyd, R. P., 249  
 Locke, S. B., 478  
 Lockhart, E. E., 518, 520, 521  
 Lockhead, A. G., 203, 265  
 Lockwood, J. L., 422, 425, 427  
 Lockwood, S., 289, 290  
 Lodge, A. L., 497  
 Lodge, R. M., 536  
 Loebeck, M. E., 272  
 Loeding, J. W., 509  
 Loefer, J. B., 296  
 Lofgren, R., 108  
 Loginova, L. G., 386  
 LoGriprio, G. A., 544  
 Logsdon, C. E., 424  
 Lohss, F., 28, 29, 30  
 Lokhov, M. G., 398  
 Lomteva, M. N., 391  
 Long, M. V., 179, 183  
 Loosli, C. G., 51, 54, 55, 58, 60, 65, 539  
 Lopes, L. A., see Assis-Lopes, L.  
 Lorenz, F. W., 542  
 Lorenz, L. L., 497  
 Losada, M., 370  
 Louttit, C. M., 103  
 Love, R., 58  
 Lovelock, J. E., 539  
 Low, B. W., 57  
 Lowenberg, J. R., 164  
 Lozinov, A. B., 389  
 Lozinsky, E., 543  
 Lucas, C. E., 279, 302  
 Lucas, G. B., 426  
 Lugenhuhl, R. J., 66

- Luippold, H. E., 313  
 Luisada-Oppen, A. V., 251  
 Lu Ju-Shan, 391  
 Lukton, A., 262  
 Lumb, G. D., 536  
 Lund, H., 113  
 Lund, J. W. G., 281, 294  
 Lunde, M. N., 109  
 Lunseth, J., 110  
 Luria, S. E., 27, 40, 338,  
 346, 358, 442  
 Lute, M., 35  
 Lutsenko, T. A., 402  
 Lwoff, A., 27, 44, 291, 295,  
 296, 297, 299, 338  
 Lynen, F., 190, 191  
 Lyons, C., 495
- M**
- Maaloe, O., 324  
 Maas, W. K., 261  
 Maanelly, J. K., 266  
 McAuliffe, C., 225  
 McBee, R. H., 160  
 McBryde, C. N., 142  
 Maccacaro, G. A., 340  
 McCallan, S. E. A., 270  
 McCallum, A. H., 238  
 MacCallum, P., 492  
 McCarthy, J. F., 287  
 McCarthy, M. A., 53  
 MacClement, W. D., 462  
 McClure, T. T., 417  
 McCombie, A. M., 292  
 MacConnell, J. T., 238  
 McConnell, W. B., 207  
 McCullough, N. M., 51, 60,  
 61, 62  
 McCune, R. M., Jr., 502  
 MacDirmid, A., 81, 97  
 MacDonald, D. L., 168  
 McDonald, I. J., 250  
 McDonald, J. C., 50, 58, 60,  
 61, 63, 64  
 McDonald, J. R., 452  
 McElroy, W. D., 204, 211,  
 219, 220, 227  
 McEvoy, D., 254  
 MacFarlane, J. O., 532  
 Macfarlane, W. V., 117  
 McGee, J., 147, 190  
 McGhee, W. J., 82, 88, 90  
 McGrew, J. R., 462  
 Mach, F., 421  
 Machlis, L., 265  
 Macias, F. M., 271  
 McIntosh, E. N., 187  
 Mackaness, G. B., 86  
 Mackay, I., 539  
 Mackay, J. H. E., 433, 434  
 Mackie, T. T., 105, 117  
 Mackinney, G., 262  
 McKinney, H. H., 449, 461  
 Mackinnon, J. P., 462  
 McLaughlin, C. B., 532  
 McLaughlin, J. J. A., 284,  
 285, 286, 289, 292, 293,  
 294, 297, 298  
 McLean, I. W., Jr., 52  
 McLean, R. A., 518  
 MacLennan, A. P., 166  
 Macleod, C. M., 77  
 MacLeod, C. M., 326, 328,  
 357  
 McLeod, D. L., 67  
 MacLeod, R. A., 251, 255  
 Macmillan, A., 204, 205,  
 206, 207, 221  
 McMullen, D. B., 117  
 McNall, E. G., 224, 250  
 Macpherson, I. A., 98  
 McQuillen, K., 1, 3, 5, 6, 9,  
 10, 14, 16, 258  
 MacRae, I. C., 213  
 MacVicar, R., 207  
 McWhorter, F. P., 461  
 Madoff, S., 18  
 Madsen, N. B., 181, 182,  
 183, 249  
 Maegraith, B., 104, 111  
 Magasanik, B., 166, 166,  
 257, 260, 261, 268, 356  
 Magee, W. E., 233, 234  
 Magness, J. R., 453  
 Mahler, H. R., 5, 6, 8, 11,  
 34, 152, 347  
 Mahn, G. R., 509  
 Maier, C. R., 429, 435  
 Maiskii, I. N., 404  
 Makela, P., 55  
 Maksimova, I. V., 390  
 Makstenieks, O., 60  
 Malakatis, G. M., 115  
 Malcolmson, J. F., 423, 424  
 Malis, G. I., 400  
 Mallette, M. F., 531  
 Mallman, W. L., 535  
 Mamatsashvili, E. G., 385  
 Mandel, H. G., 258, 269  
 Mandels, M., 161, 260  
 Mankau, S. K., 118  
 Mann, S. O., 163, 166  
 Manns, M. M., 462  
 Manns, T. F., 462  
 Manolov, D. G., 397  
 Mantel, N., 105  
 Maplestone, P. A., 112, 113  
 Marcovich, H., 320  
 Markham, R., 42, 258  
 Markitanova, A. E., 402  
 Markov, K. I., 255  
 Marks, J., 493  
 Marlatt, R. B., 420  
 Marmur, J., 326, 327  
 Marrian, D. H., 247  
 Marshall, C. G., 535  
 Marth, P. C., 453  
 Mathews, I., 452  
 Martin, A. V., 333  
 Martin, C., 486  
 Martin, J. K., 254  
 Martin, S. P., 502  
 Martin, W. R., 192, 259, 260
- Martinez, D., 301  
 Martinez, M., 227  
 Martyniuk, I. V., 386  
 Mase, Y., 263  
 Mashkov, A. V., 398  
 Masilunga, V. A., 117  
 Maslenikova, L. K., 406  
 Mastrota, F. M., 49, 66,  
 67, 68, 69  
 Matheson, B. H., 494  
 Mathews, J., 541  
 Mathews, J. N., 426  
 Mathieson, M. J., 370, 372  
 Matsubayashi, R., 217  
 Matsuzawa, M., 66  
 Matthews, R. E. F., 257  
 Matudaira, T., 286  
 Maurice, P., 536  
 Maurin, J., 57  
 Mauris, C., 51, 58, 59, 63  
 Mayall, R., 114  
 Mayer, A., 443  
 Mayhew, R. L., 112, 113  
 Maylor, H. B., 250  
 Mazé, R., 345  
 Mazia, D., 321  
 Mazilkin, I. A., 394  
 Mazoyer, M. K., see Kono-  
 valchikov-Mazoyer, M.  
 Meadow, P., 5, 9, 10, 271  
 Medina, A., 223, 225, 226  
 Mehler, A. H., 179, 184  
 Meier, P., 528  
 Melklejohn, G., 70  
 Meira, J. A., 115  
 Meisel, M. N., 391  
 Meister, P. D., 263  
 Mekhtiev, S. I., 394  
 Melechen, N., 39, 44  
 Meleney, H. E., 117  
 Melkumova, T. A., 385  
 Mel'nik, E. G., 397  
 Melton, M. L., 109  
 Melvin, D. M., 103  
 Mendelevich, M. M., 403  
 Mendenhall, E. E., 534  
 Menkin, V., 496, 502  
 Mercer, R., 113  
 Mergenhagen, S. E., 250  
 Merriam, H. E., 138  
 Meselson, M., 324  
 Metcalfe, G., 237  
 Meyer, E., 81, 96  
 Meyer, H., 108  
 Meyer, K. F., 79, 81, 95,  
 96  
 Miagkaia, I. P., 407  
 Michaels, M., 167  
 Mickelsen, O., 542  
 Migliacco, A., 253  
 Mikhailov, I. F., 406  
 Mikhailova, I. F., 402  
 Mikhailenko, Z. V., 403  
 Mikulin, M. A., 395  
 Milbrath, J. A., 457, 459  
 Miles, A. A., 77, 78, 82, 85,  
 86, 94, 98, 501, 502

- Miles, E. M., 85, 86, 502  
 Miles, P. G., 374  
 Millitzer, W. E., 16  
 Millar, R. L., 428, 434  
 Miller, B. F., 539  
 Miller, C. O., 469, 475, 476  
 Miller, C. S., 257  
 Miller, D. A., 251  
 Miller, H. N., 430  
 Miller, J. W., 106  
 Miller, L. P., 270  
 Miller, M. J., 103  
 Miller, P. M., 416  
 Miller, W. C., Jr., 512, 513  
 Millikan, D. F., 462  
 Mills, G. T., 161, 162  
 Mills, W. D., 416, 456, 457  
 Milner, H., 303  
 Minami, K., 270  
 Mineeva, L. V., 388  
 Minghetti, A., 253  
 Minner, J. R., 51, 56  
 Minning, W., 116  
 Minoda, R., 62, 65  
 Minor, F. W., 156, 157, 158  
 Minuse, E., 67  
 Mirzabekian, R. O., 418  
 Mishustin, E. N., 393  
 Mitchell, H. K., 252, 365, 366, 368, 369, 370, 373  
 Mitchell, J. W., 415, 419, 420, 431  
 Mitchell, M. B., 366, 368, 369, 370, 373  
 Mitchell, P., 1, 4, 5, 7, 8, 11, 12, 14, 16, 193, 247  
 Mitchell, R. L., 288  
 Mitina, T. V., 407  
 Mitsui, Y., 62, 63, 65  
 Miyazaki, I., 114  
 Mogabgab, W. J., 49, 70, 71  
 Mohler, J. R., 131  
 Monlux, W. S., 109  
 Monod, J., 154, 165, 173, 193, 247, 259, 268  
 Monsour, V., 236  
 Montgomery, M., 531  
 Montgremier, H. de A., see Augier de Montgremier, H.  
 Montoya, C., 112  
 Moody, M. D., 325  
 Moore, D. H., 52, 56, 56, 58  
 Moore, J. D., 455, 457, 458  
 Moore, V. A., 135  
 Mordashev, S. R., 391  
 Morehouse, C. T., 514, 521  
 Morel, G., 473, 474, 484, 485, 486  
 Moreno, L., 110  
 Morgan, B. H., 513, 514, 516  
 Morgan, C., 52, 56, 57, 58  
 Morgan, M. E., 250  
 Mori, T(akako), 231  
 Mori, T(akeshi), 217  
 Morioka, T., 5, 8  
 Morita, T., 300  
 Moroz, A. F., 386  
 Morris, J. A., 49, 69  
 Morris, W. T., 416, 418  
 Morrison, J. F., 188  
 Morse, H., 60  
 Morse, M. L., 335, 336, 350  
 Mortensen, J. D., 532  
 Morton, A. G., 205, 206, 207, 221  
 Morton, H. E., 530, 531  
 Morton, T. C., 103  
 Moser, H., 317  
 Moses, V., 179  
 Moss, V. D., 430  
 Most, H., 105, 106  
 Mouroumseff, G., 539  
 Moyle, J., 1, 4, 5, 7, 8, 11, 12, 14, 16  
 Mozen, M. M., 232  
 Mudd, S., 18, 271, 530  
 Mudd, S. H., 258  
 Muhrer, M. E., 226  
 Muir, E., 476, 477, 486  
 Muir, R. D., 263  
 Muir, W. H., 472, 483, 484  
 Mukai, F., 373  
 Mukherjee, M. K., 237  
 Mulder, D., 459  
 Muller, K. O., 433, 434  
 Mullet, R. P., 426  
 Munkata, K., 67  
 Munkres, K., 369  
 Murano, H., 434  
 Murneek, A. E., 416  
 Murphy, J. F., 173, 174  
 Murphy, P. A., 445  
 Murray, E. G. D., 443  
 Murray, E. S., 63  
 Murray, H. C., 263  
 Murray, M. R., 469  
 Murray, N. A., 114  
 Murty, G. G. K., 270  
 Mutsaers, W., 4, 7, 10  
 Myatt, A. V., 111  
 Myern, J., 206, 237, 285  
 Myers, R., 49, 69
- N
- Nabokov, I. S., 386  
 Nagao, M., 114  
 Nagy, R., 539  
 Najjar, V. A., 212, 215, 216  
 Nakagawa, T., 339  
 Nakao, T., 66  
 Nakayama, T., 262  
 Nakhimson, L. I., 405  
 Napier, E. J., 432  
 Napier, J. A., 528  
 Napier, L. E., 113  
 Nashke, M. D., 180  
 Nason, A., 203-46; 153, 205, 210, 215, 216, 218, 219, 221, 222, 223, 225, 226, 227, 232, 234, 236, 270  
 Nathan, H. A., 289, 290  
 Nathan, H. C., 269  
 Natti, J. J., 422, 427, 435  
 Nauck, E. G., 103  
 Nayder, F., 271  
 Neas, M. O., 426  
 Nečas, O., 21  
 Nechaev, V. V., 406  
 Neeb, O., 287, 288  
 Neff, B. J., 55  
 Neidhardt, F. C., 260, 261, 356  
 Neillands, J. B., 263, 265  
 Neilsen, N., 267  
 Neish, A. C., 149, 164  
 Neisser, M., 533  
 Nelson, E. W., 288  
 Nelson, N. J., 320, 352  
 Nelson, N. M., 160  
 Nelson, P. R., 295  
 Nelson, R., 423, 429, 443  
 Nelson, R. R., 377  
 Nelson, T. C., 342  
 Neva, F. A., 51  
 Nevill, A., 206, 217  
 Newman, L. B., 541, 542  
 Newmeyer, D., 351  
 Newton, B. A., 535  
 Newton, W. L., 116  
 Nichol, C. A., 252  
 Nicholas, R. L., 113  
 Nicolas, A., 51, 62, 63  
 Nicholas, D. J. D., 210, 214, 218, 219, 223, 225, 226,  
 Nickell, L. G., 483, 485  
 Nickerson, J. T. R., 518, 519, 520, 521  
 Niedergang-Kamen, E., 476  
 Nienow, I., 431  
 Niles, W. B., 142  
 Nisbet, M., 302  
 Nishigaki, S., 237  
 Nishihara, H., 535  
 Nishikawa, F., 66  
 Nisman, B., 5, 15, 16  
 Nitowsky, R. T., 64  
 Nitsch, C., 477  
 Nitsch, J. P., 477  
 Niven, C. F. Jr., 507-24; 267, 271, 508, 511, 513, 514, 518, 521  
 Niven, J. S. F., 501  
 Niwa, M., 209  
 Nobecourt, P., 475  
 Nobel, E. K., see Klitene-berger-Nobel, E.  
 Noblesse, M., 164  
 Nomura, M., 8, 190, 191  
 Nord, F. F., 161  
 Nordan, H. C., 514, 515  
 Norden, H. C., 513  
 Nordgren, G., 538  
 Nordli, E., 286  
 Norris, E. R., 168  
 Norris, J. R., 255  
 North, L. L., 530, 531  
 Noskova, E. G., 387  
 Novelli, G. D., 179, 253  
 Novick, A., 310, 317

Nungester, W. J., 86  
 Nutman, P. S., 177  
 Nutting, L. A., 149  
 Nygard, J. C., 509

## O

Oberholzer, P. C. J., 452  
 Oberle, E. M., 510, 512, 513  
 O'Brien, R. T., 270  
 Ocfemia, G. O., 462  
 Ochi, M., 66  
 Ochoa, S., 146, 153, 179,  
 180, 236  
 Odom, V., 105  
 Offutt, A. C., 103  
 Ogata, S., 62, 65  
 Ogawa, J. M., 418  
 Ogg, J. E., 311, 346  
 Oglesby, G., 266  
 Ogston, A. G., 185  
 Ogur, M., 366, 373  
 Ohashi, K., 66  
 O'Hea, A. J., 77  
 Ohmachi, K., 221  
 Ohmura, E., 190, 260  
 Ohmura, H., 223  
 Oikawa, T., 93  
 O'Kane, D. J., 145, 179  
 Okaniwa, A., 67  
 Oker-Blom, N., 55, 60, 61,  
 64  
 Okumura, F. S., 475  
 Okuno, Y., 66  
 Olafson, P., 109  
 Olenberg, G., 502  
 Olive, L. S., 368, 372, 376  
 Oliver-Gonzalez, J., 116  
 Olivier, L., 117  
 Olivo, J. P., 514  
 Olson, E. J., 163  
 Olson, E. O., 452  
 Olson, J. A., 181, 183  
 Onofrey, E., 255  
 Onvlee, P. C., 542  
 Oparin, A. I., 4, 7, 10, 14, 390  
 Oppen, A. V. L., see  
 Luisada-Oppen, A. V.  
 Orgel, L. E., 350  
 Orkin, B. A., 170  
 Orla-Jensen, A. D., 267  
 Orla-Jensen, S., 267  
 Ormsby, H. L., 50, 60, 61,  
 62, 63  
 Ortenzio, L. F., 541  
 Oshima, H., 66  
 Osipova, P. V., 396  
 Osterud, K. L., 296  
 Ottey, L., 167  
 Otto, G. F., 105  
 Overhulse, P. R., 544  
 Oxford, A. E., 163, 166  
 Ozeki, H., 335, 349

## P

Packalen, T., 500

Paden, W. R., 461  
 Paffenbarger, R. S., 51, 52,  
 61, 64, 65  
 Pahl, H. B., 332  
 Paine, J., 461  
 Painter, H. A., 230  
 Painter, R. B., 323  
 Palleroni, N. J., 151, 190  
 Palmiter, D. H., 458  
 Palmstierna, H., 164, 165  
 Panijel, J., 5, 8  
 Panisset, M., 262  
 Pankova, S. S., 402  
 Panos, C., 262  
 Papazian, H. P., 374  
 Papirmeister, B., 116  
 Pappas, I., 286  
 Pappenheimer, A. M., Jr.,  
 77  
 Pardee, A. B., 1, 20, 194,  
 259, 261, 316, 347  
 Park, J. T., 20, 34, 163  
 Parker, C. A., 238  
 Parker, E., 52, 56, 57  
 Parker, K. G., 452, 453, 454,  
 456, 458  
 Parker, R. C., 469, 487  
 Parks, L. W., 252, 369  
 Parodi, S. E., 114  
 Parrish, G., 103, 514, 515  
 Parrish, M., 103  
 Parrott, R. H., 50, 51, 52,  
 53, 54, 55, 59, 60, 61, 62,  
 63, 64, 65, 66, 67, 68, 69  
 Partridge, C. W. H., 320,  
 352  
 Pasteur, L., 91  
 Pastukhova, G. M., 399  
 Patel, M. D., 167, 170, 171,  
 183  
 Pateman, J. A., 351, 369,  
 370  
 Patterson, M., 52  
 Pattison, D. B., 170  
 Patty, F. A., 543  
 Paulus, A., 419  
 Payne, A. M. M., 49, 50, 51  
 Payne, F. M., 103, 106  
 Payne, J. I., 271  
 Pazur, J. H., 165, 166  
 Pchelkina, A. A., 399  
 Pearsall, W. H., 281, 283  
 Pease, P., 18  
 Pedigo, P. R., 366  
 Peck, H. D., Jr., 188, 189,  
 230, 231, 233  
 Peel, E., 115  
 Peel, J. L., 145-202  
 Pelet, F., 483  
 Pelevina, M. V., 386  
 Pelon, W., 49, 70, 71  
 Pengra, R. M., 232  
 Penner, L. R., 117  
 Pepper, R. E., 514, 521  
 Pereira, H. G., 51, 53, 54,  
 55, 61, 63, 64, 65  
 Pereira, J. N., 250  
 Peremitina, L. D., 385  
 Peres, C., 105  
 Perkins, B. L., 424  
 Perkins, D. D., 371, 372  
 Perkins, J. J., 542  
 Perlingiero, J., 113  
 Pervachenko, S. V., 404  
 Pesigan, T. P., 117  
 Petersen, D., 417  
 Petersen, R. A., 289, 290  
 Peterson, D. H., 263  
 Peterson, D. R., 286  
 Peterson, E. A., 428  
 Peterson, H. I., 177  
 Peterson, R., 267  
 Peterson, W. H., 430  
 Pettit, J. F., 264  
 Petkus, E. J., 509  
 Petrosian, A. P., 390  
 Pfander, W. N., 226  
 Phelps, W. R., 430  
 Phillips, B. P., 103, 104,  
 105  
 Phillips, C. R., 525-50; 534,  
 537, 538, 540, 541, 542,  
 543  
 Phillips, D. M., 333  
 Phillips, I. A., 49, 70, 71  
 Phillips, J. H., 335  
 Phillips, L., 105  
 Phillips, M. M., 366  
 Phung, Le-Van, see Le-Van  
 Phung  
 Pichinoty, F., 224  
 Piekarski, G., 109  
 Pierce, C. H., 81, 93  
 Pierce, W. E., 49, 58, 70,  
 71  
 Pifano, F., 107  
 Pillai, V. K., 287  
 Pille, E. R., 406  
 Pillemer, L., 111, 492  
 Pimental, J., 115  
 Pinchot, G. B., 152  
 Pinnock, P. R., 57  
 Pinsky, A., 167  
 Pintner, I. J., 279, 283, 284,  
 285, 286, 297, 298, 300,  
 302  
 Piriattinski, L. B., 401  
 Pirson, A., 287  
 Pittenger, T. H., 373  
 Pittman, D. D., 366, 373  
 Pitts, T. D., 115  
 Pivnick, H., 247  
 Pizzi, T., 108, 110  
 Plakidas, A. G., 462  
 Plaut, W., 321  
 Plescia, O., 335  
 Pletsityi, D. F., 404, 407  
 Podoski, E. P., 181  
 Poetschke, G., 18  
 Pokrovskaya, N. V., 390  
 Pollack, M. R., 217  
 Pollard, J. K., 475  
 Pollitzer, R., 79, 95  
 Pomales, A. B., see

Brenes-Pomales, A.  
 Ponte, E. del, 106  
 Pontecorvo, G., 365, 367,  
 368, 369  
 Pope, S., 254  
 Popova, L. A., 392  
 Poppensiek, G. C., 541  
 Porat, T. B., see Ben-Porat,  
 T.  
 Portelance, V., 262  
 Porter, K. R., 108  
 Porterfield, V. T., 239  
 Portmann, A., 267  
 Posnette, A. F., 457  
 Postgate, J., 214  
 Potter, R. L., 272  
 Poulos, P. L., 416  
 Povalishina, T. P., 106  
 Powell, H. M., 532  
 Powell, J. F., 163  
 Powers, H. R., Jr., 428  
 Pradatsundarasar, A., 114  
 Pramer, D., 432, 433, 434  
 Pratt, D. M., 295  
 Prescott, D. M., 351  
 Prescott, G. C., 417  
 Prestidge, L. S., 20, 347  
 Preston, W. H., 431  
 Prezyna, A., 110  
 Price, D. L., 115  
 Price, S. A., 493  
 Price, W. C., 442, 448, 449  
 Price, W. H., 49, 70  
 Prickett, P. S., 542  
 Prieto, A. P., 147  
 Prigal, S. J., 503  
 Priyanonda, B., 114  
 Primosigh, J., 20, 28, 32,  
 33, 34  
 Pringsheim, E. G., 206  
 Prior, J. A., 109  
 Pritchard, R. H., 368, 369,  
 370  
 Proctor, B. E., 509, 510,  
 512, 513, 517, 518, 519,  
 520, 521, 522  
 Proctor, V. W., 206, 303  
 Prommas, C., 114  
 Proom, H., 325  
 Protzenko, A. E., 384  
 Provasoli, L., 279-308; 279,  
 283, 284, 285, 286, 288,  
 289, 295, 296, 297, 298,  
 299, 300, 301, 302, 310  
 Prusoff, W. H., 258  
 Pshenichnov, A. V., 398, 399  
 Ptokhov, M. P., 400  
 Puchett, N., 271  
 Puchkov, N. V., 401  
 Puck, T. T., 29, 30, 32, 33,  
 35, 36, 539  
 Pulvertaft, R. J. V., 536  
 Purko, M., 187

## Q

Quadling, C., 310, 351

Quakenbush, F. W.,  
 263  
 Quastel, J. H., 177  
 Quince, P., 146  
 Quinn, D. H., 534

## R

Rabil, P. J., 542  
 Rabin, R., 258  
 Rabinowitz, J. C., 267  
 Rabourn, W. J., 263  
 Racker, E., 148, 158  
 Radionova, L. N., 406  
 Raffel, S., 77  
 Rahn, O., 536  
 Raichel, B., 2  
 Rakestraw, J. A., 233, 270  
 Rakhno, P. K., 237, 384  
 Raleigh, W. P., 453  
 Rammelkamp, C. H., Jr.,  
 497  
 Ramsey, H. H., 266, 267  
 Randle, C. J. M., 166  
 Ranftl, J. W., 509  
 Rangaswami, G., 428  
 Rankin, H. W., 447  
 Rao, C. B., 281  
 Rao, V., 114  
 Raper, J. R., 374, 375  
 Rappoport, D. A., 148  
 Rappaport, J., 484  
 Rashba, E. I., 390  
 Rausch, R., 117  
 Ravel, J. M., 266  
 Ravenholt, R. J., 504  
 Ravin, A. W., 309-64; 326,  
 357  
 Rawlins, T. E., 431, 452,  
 486  
 Rawson, D. S., 282  
 Raymond, W. F., 539  
 Read, T. R., 104, 106  
 Reardon, L. V., 103, 104,  
 105  
 Reddish, G. F., 529, 530,  
 532, 537  
 Reed, J. M., 514, 516  
 Reed, L., 542  
 Reed, L. J., 265  
 Rees, C. W., 103, 104, 105  
 Reese, E. T., 161, 164, 260  
 Reeves, E. L., 457, 458  
 Reich, K., 292  
 Reichel, L., 263  
 Reichelderfer, T., 49, 66,  
 67, 68, 69  
 Reid, E. E., 536  
 Reid, J. J., 177  
 Reiman, J., 503  
 Reiner, B., 316  
 Reinert, J., 470, 478  
 Reinertson, J. W., 104  
 Reio, L., 179  
 Rendtorff, R. C., 104  
 Renjifo, S., 107  
 Repaske, R., 5, 7, 153, 194  
 Resag, K., 228  
 Reyniers, J. A., 103  
 Rhea, W. G., Jr., 269  
 Rheims, M. S., 504  
 Rhodes, A., 432  
 Rhodes, A. J., 67  
 Rhodes, G. N., 426  
 Rhuland, L. E., 271  
 Rice, T. R., 288  
 Rich, A., 41  
 Rich, K., 316  
 Rich, S., 427  
 Richards, B. L., 458  
 Richards, E. L., 266  
 Richards, M. G., 462  
 Richardson, E. M., 536  
 Richter, A., 340, 342, 358  
 Richter, G. H., 533  
 Rickenberg, H. V., 5, 8  
 194, 247, 259, 353  
 Richert, D. A., 222, 228  
 Riddle, K. B., 542  
 Riddle, R. W., 60, 61, 64  
 Rideal, S., 529  
 Rieman, G. H., 487  
 Rier, J. P., 473  
 Riker, A. J., 469-90; 418,  
 430, 470, 472, 476, 477,  
 478, 479, 480, 481, 482,  
 483, 484, 486  
 Rilling, H., 262  
 Rita, G., 338  
 Ritchie, L. R., 117  
 Ritchie, L. S., 103, 117  
 Rittenberg, D., 224, 228  
 Riviere, J. W. M. la, 190,  
 191, 192  
 Robbins, K. C., 492  
 Robbins, W. C., 335  
 Robbins, W. J., 297, 301,  
 471, 486  
 Roberts, C., 366, 367, 370  
 Roberts, E. R., 233, 234,  
 270  
 Roberts, J. L., 542  
 Roberts, M. H., 536  
 Roberts, R. B., 179, 184,  
 205  
 Robertson, O. H., 539  
 Robichon-Szulmajster, H.  
 de, 355  
 Robinow, C. F., 1, 311, 370  
 Robinson, D. B., 423  
 Robinson, R. S., 429, 430,  
 432, 434  
 Robinson, T. A., 104, 106  
 Robles, H., 112  
 Rochat, G., 533  
 Rodan, K. S., 60, 61, 64  
 Rode, L. J., 266  
 Roden, A. T., 54, 61, 65  
 Rodger, W. A., 509  
 Rodriguez, E., 257, 289,  
 290  
 Roe, A. S., 326, 357  
 Rogers, D., 267  
 Rogers, D. E., 495, 496, 502



- Rogers, H. J., 165, 500  
 Rogoff, M. H., 174, 177  
 Rohde, W., 283, 292, 293, 294  
 Roizman, B., 49, 54, 55, 56, 69  
 Román, C., 110  
 Roman, D. P., 270  
 Roman, H., 366, 367, 368  
 Romans, I. B., 534  
 Romig, W. R., 314  
 Romine, M., 542  
 Roof, B. S., 167  
 Roper, J. A., 369, 370  
 Rose, D., 267  
 Rose, H. M., 52, 56, 57, 58  
 Rose, I. A., 153, 236  
 Roseman, C., 109  
 Roseman, S., 166  
 Rosen, L., 56  
 Rosenblum, C., 253  
 Rosenblum, E. D., 231  
 Rosenthal, S. M., 266  
 Ross, G. I. M., 299, 300  
 Ross, J. D., 98  
 Ross, O. A., 111  
 Rostorfer, H. H., 228  
 Rothberg, S., 167, 213  
 Rothrock, J. W., 425  
 Rotov, I. V., 405  
 Rountree, P. M., 504  
 Roussos, G. G., 226  
 Rowatt, E., 265  
 Rowe, W. P., 49-76; 50, 51, 52, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65  
 Rowell, J. B., 377  
 Rowlands, D. A., 247  
 Rowley, D., 3, 341, 342, 358  
 Roy, A. B., 237  
 Ruban, E. L., 229, 230, 233, 390  
 Rubio Huertos, M., 18  
 Ruinen, J., 237  
 Rupert, C. S., 320  
 Rush, D., 166, 186  
 Russell, P. F., 106, 107, 111, 112  
 Russi, M., 338  
 Ryan, F. J., 317, 318  
 Ryan, R. W., 51, 63, 64, 65  
 Rybakova, S. G., 395  
 Ryden, F. W., 105  
 Rydon, H. N., 81  
 Rytkin, S. S., 390  
 Ryther, J. H., 292, 293, 296  
 Ryzhkov, V. L., 391
- S
- Sabet, K. A., 428  
 Sabin, A. B., 109  
 Sacks, L. E., 212, 213, 216  
 Sadana, J. C., 211  
 Sadun, E. H., 104  
 Saev, G. K., 255  
 Sagae, K., 66  
 Sagers, R. D., 189  
 Sagik, B., 30  
 Salki, E., 543  
 St. John, R., 366, 373  
 St. Lawrence, P., 367, 368, 369, 370  
 Saito, H., 366  
 Saito, Y., 190  
 Sakaguchi, K., 374  
 Sakhnovskaia, G. K., 393  
 Sakurogi, T., 270  
 Salk, J. E., 528  
 Sall, T., 271  
 Salle, A. J., 530, 533, 538  
 Salton, M. R. J., 1, 2, 3, 4, 5, 6, 8, 10, 14, 84, 163, 535  
 Saluste, E., 179  
 Sanders, E. P., 104  
 Sanders, F., 252  
 Sanders, M., 285, 289, 290  
 Sanders, R. T., 526  
 Sands, S. M., 366  
 Sansome, E., 368, 369  
 Santer, M., 146  
 Santer, U. V., 353  
 Saper, E., 405  
 Saper, J. J., 103, 105  
 Sappenfield, R. W., 103, 106  
 Sargeant, K., 88, 90, 92  
 Sarachek, A., 271  
 Saris, N. E., 225  
 Sarma, P. S., 266  
 Sasahara, J., 66, 67  
 Saslaw, S., 109  
 Sato, R., 208, 209, 211, 215, 223  
 Saunders, G. W., 302  
 Savage, R. E., 49, 69  
 Savan, M., 541  
 Sawitz, W., 105  
 Sayad, W. Y., 114  
 Sayre, C. B., 422  
 Sax, A. K., 227  
 Sax, H. J., 181, 183, 184, 249  
 Scawin, J. H., 219  
 Schachman, H. K., 1  
 Schaechter, M., 259  
 Schaedler, R. W., 503  
 Schaefer, W. B., 81, 93  
 Schaeffer, F. L., 529  
 Schaeffer, P., 326, 327, 330, 331, 357, 358  
 Shaffer, T. E., 504  
 Schaffner, C. P., 263  
 Schar, M., 95  
 Schatten, W. E., 58  
 Schatz, A., 272, 288, 310  
 Scheider, M., 534  
 Schellenberg, H., 17, 18  
 Schenone, H., 112  
 Scher, S., 285, 289, 290  
 Scherp, H. W., 250  
 Schiller, E. L., 117  
 Schlegel, D. E., 431  
 Schleich, F., 108  
 Schmidt, C. F., 516  
 Schneider, C., 228  
 Schneider, M. C., 180  
 Schmitter, R., 541, 543  
 Schoenleber, A. W., 106  
 Schramm, M., 148, 155, 156, 157, 158, 159, 160  
 Schricker, J. A., 542  
 Schrodter, H., 419  
 Schubert, W. J., 161  
 Schuhardt, V. T., 266  
 Schul'man, E. S., 114  
 Schulman, H. M., 5, 10, 19, 347  
 Schultz, E. S., 443  
 Schultz, H. W., 513  
 Schulz, I., 181  
 Schwab, J. H., 94, 95  
 Schwartz, A. M., 156, 157  
 Schwartz, G., 534  
 Schweigert, B. S., 271, 518  
 Schwenk, E., 263  
 Schwerdt, C. E., 529  
 Schwetz, J., 115  
 Scott, C. E., 416, 444  
 Scott, D. B. M., 324  
 Scott, D. H., 462  
 Scott, G. D., 237, 291  
 Scott, R. W., 462  
 Seal, J. R., 51, 58, 59  
 Seaman, G. R., 180, 225, 252  
 Sèchaud, J., 40  
 Segal, N., 82, 86, 92, 93  
 Segal, S., 166  
 Segretain, G., 485  
 Seidelin, R., 103  
 Seidler, A. J., 271  
 Seki, Y., 5, 8  
 Sellber, L. G., 389  
 Selimov, M. A., 403  
 Selzer, L., 531  
 Semcheva, N. S., 389  
 Semenov, B. F., 400  
 Semenova, E. V., 403  
 Sen, K., 114  
 Senez, J. C., 224  
 Sergeant, T. P., 267  
 Sergeeva, R. V., 213  
 Sermoniti, G., 346, 374  
 Sermoniti, I. S., see Spada-Sermoniti, I.  
 Serres, F. de, 367, 369  
 Serres, F. J. de, 367, 369  
 Setlow, J. K., 300  
 Sexton, R. J., 543  
 Sforza, L. L. C., see Cavalli-Sforza, L. L.  
 Shablovskaja, E. A., 393  
 Shaefer, W. B., 270  
 Shaffer, J. G., 105  
 Shamaeva, E. M., 402  
 Shan, L. J., see Lu Ju-Shan  
 Shantz, E. M., 469, 474, 475  
 Shapiro, H. S., 5, 10, 19, 347  
 Shapiro, J., 302  
 Shapiro, R. L., 534

- Sharp, J. T., 18  
 Sharpe, H. S., 374  
 Shaughnessy, H. J., 535  
 Shaw, L., 426  
 Sheehan, H. L., 93  
 Sheffner, A. I., 266  
 Sheinker, A. P., 387  
 Shelokov, A., 68  
 Shemanova, G. F., 391  
 Shepard, P., 417  
 Sherman, H. J., 104, 105, 106  
 Sherman, J. M., 267  
 Shertsal, I., 402  
 Sheveleva, O. N., 387  
 Shih, B. C., 105  
 Shilo, (M)iriam, 292  
 Shilo, (M)oshe, 190, 191, 192, 193, 194, 259, 292  
 Shimazono, H., 190  
 Shimwell, J. H., 156  
 Shiraki, M., 227  
 Shiratori, T., 66, 67  
 Shirk, H. G., 156, 157, 158  
 Shive, W., 268  
 Shmonova, N. I., 395  
 Shneerson, A. N., 401  
 Shockman, G. D., 267  
 Sholl, L. B., 141  
 Shonnard, C. P., 544  
 Shooter, K. V., 333  
 Shorin, V. A., 392, 402  
 Short, R. B., 116  
 Shternov, V. A., 536  
 Shu, P., 164  
 Shuey, E. W., 165, 166  
 Shuey, H. E., 51, 58, 59, 63  
 Shug, A. L., 230, 231, 347  
 Shugaeva, N. V., 389  
 Shult, E. E., 368, 371  
 Shvalko, V. A., 397  
 Sibray, W. S., 419  
 Sienkiewicz, H. S., 105  
 Sih, C. J., 160  
 Silm, J. C., 109  
 Sijpesteijn, A. K., 160  
 Silber, G., 420  
 Sil'chenko, V. S., 398  
 Silver, W. S., 222, 227  
 Silverman, W. B., 427  
 Simon, W. R., 494  
 Simms, B. T., 128  
 Simms, E. S., 257  
 Simmonds, S., 251  
 Simon, T., 110  
 Simpson, F. J., 149, 164  
 Simpson, See Hope Simpson, R. E.  
 Simpson, J. R., 229  
 Sims, P., 170  
 Singer, T. P., 531  
 Singh, R. N., 281, 291  
 Singh, S., 114  
 Sirnik, I. O., 396  
 Sironval, C., 236  
 Sison, A., 114  
 Sison, B. C., 161  
 Siström, W. R., 14, 168, 356  
 Skaar, P. D., 340, 344, 349, 350  
 Skeehan, R. A., Jr., 542, 543  
 Skeggs, H. R., 257  
 Skerman, V. B. D., 213  
 Škoda, J., 258  
 Skoog, F., 283, 285, 300, 469, 472, 475, 476  
 Skrzabin, K. I., 114  
 Slater, E. C., 153, 236  
 Sleeth, B., 452  
 Slein, J. B., 92  
 Slie, R. B., 227  
 Slotnick, I. J., 255, 256  
 Sluvko, A. L., 386  
 Smart, K. M., 503  
 Smiley, K. L., 267  
 Smirnova, N. P., 402  
 Smirnovskaia, A. S., 387  
 Smith, B. S. W., 168, 171, 177, 178  
 Smith, C. R., 535  
 Smith, D. C., 530  
 Smith, E. E. B., 161, 162  
 Smith, F. F., 461, 462  
 Smith, H., 77-102; 77, 78, 79, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 95, 96, 97  
 Smith, J., 303  
 Smith, J. D., 257, 258  
 Smith, J. L. K., see Kirby-Smith, J. L.  
 Smith, J. M., 502  
 Smith, J. W., 56  
 Smith, K. M., 442, 443, 444, 445, 449, 454  
 Smith, L., 154  
 Smith, M. E., 53, 54, 55, 60  
 Smith, M. H. D., 539  
 Smith, M. L., 493  
 Smith, M. M., 496  
 Smith, N., 86  
 Smith, P. F., 249, 250  
 Smith, P. W. H., see Harris-Smith, P. W.  
 Smith, R. A., 181, 183, 184, 249  
 Smith, R. R., 58  
 Smith, T., 136  
 Smith, W., 58, 419, 495, 496  
 Smith, W. E., 18  
 Smith, W. J., 419  
 Smith, W. L., Jr., 424  
 Smorodintsev, A., 399  
 Smorodintsev, A. A., 405  
 Snelder, U. C., 272  
 Snell, E. E., 253, 266, 267, 272  
 Snell, F. D., 534  
 Snell, N., 267  
 Snellbaker, L. F., 56  
 Snyder, H., 113  
 Snyder, J. C., 63  
 Sobel, G., 61, 64  
 Soberheim, G., 87, 88, 89  
 Sobotka, H., 251, 289, 290  
 Socolofsky, M. D., 314  
 Sodeman, W. A., 106  
 Sokatch, J. T., 147, 150, 154, 164  
 Sokurova, E. N., 391  
 Solov'ev, V. N., 401  
 Sommerville, R. G., 67  
 Sommer, H., 81, 96  
 Sondheimer, E., 417  
 Sonneborn, T. M., 310  
 Sordelli, A., 533  
 Šorm, F., 258  
 Southam, C. M., 58  
 Southcott, B. A., 253  
 Souza, P. de, 423  
 Sowden, F. J., 176  
 Sowden, J. C., 148  
 Spada-Sermon, I., 346  
 Spärek, J. V., 310  
 Speck, M. L., 251, 266  
 Spector, B. K., 106  
 Spencer, D., 216, 226, 227, 232  
 Spencer, M. J., 503  
 Spiegelman, S., 5, 6, 10, 13, 15, 16, 259, 312, 347, 350, 368, 370  
 Spilman, W., 347  
 Spink, W. W., 496  
 Spirin, A. S., 389  
 Spirites, M., 535  
 Spitz, S., 110  
 Spizizen, J., 5, 7, 11, 347  
 Spoehr, H. A., 303  
 Spoerl, E., 271  
 Spooner, D. F., 108  
 Sprinson, D. B., 253  
 Srb, A. M., 375  
 Sreenivasan, A., 212  
 Stackiw, W., 67  
 Stadler, D. R., 371, 372  
 Stadtman, E. R., 149  
 Stähelin, H., 4, 5, 9, 12  
 Stahl, F. W., 27, 40, 42, 43, 324  
 Stakman, E. C., 377  
 Stallones, R. A., 51, 52, 59, 65  
 Stambaugh, W. J., 430  
 Stamm, W. P., 103  
 Stanier, R. Y., 1, 160, 167, 168, 191, 192, 194, 212, 259, 356  
 Stanley, J. L., 79, 82, 83, 88, 89, 90, 91, 92, 97  
 Stapleton, G. E., 508, 511, 512  
 Stark, O. K., 531  
 Starkey, R. L., 429, 432, 434  
 Starlinger, P., 349

- Starr, G. H., 419  
 Starr, M. P., 325  
 Starr, P. B., 542  
 Starr, T. J., 301  
 Stauffer, J. F., 374, 375  
 Stebbins, M. E., 297, 301  
 Steckelmacher, S., 114  
 Stedman, R. L., 535  
 Steel, R., 155, 156  
 Steenson, T. I., 177  
 Stehle, R. L., 543  
 Stein, J. H., 88  
 Stein, J. R., 296  
 Stempen, H., 18  
 Stent, G., 321  
 Stent, G. S., 6, 10, 27, 38, 39, 40, 42, 43, 322, 366  
 Stern, C., 368  
 Stern, J. R., 180  
 Sterne, M., 79, 325  
 Stessel, G. J., 425  
 Stevens, H. M., 219  
 Stevens, M. F., 493  
 Stevenson, R. E., 52  
 Steward, F. C., 469, 474, 475  
 Stewart, F. C., 456  
 Stewart, M. T., 51  
 Steyskal, F., 533, 534  
 Steyskal, K., 533, 534  
 Stich, H. F., 351  
 Stiefel, J. R., 535  
 Stiemie, S. F., 452  
 Stirewalt, M. A., 116  
 Stjernholm, R., 165, 179  
 Stockhill, S. M., 235  
 Stocker, B. A. D., 310, 335, 351  
 Stoebber, F., 260  
 Stoffel, P. J., 270  
 Stokstad, E. L. R., 267, 296  
 Stojmakova, A. I., 404  
 Stone, B. A., 160  
 Stone, R. L., 532  
 Stone, R. W., 173, 174  
 Stoner, H. B., 95  
 Stonier, T., 478  
 Storck, R., 4, 6, 7, 10, 16  
 Storey, I. D. E., 161  
 Storm, J., 297  
 Stoy, V., 221  
 Strain, H., 303  
 Strandstrom, H., 55, 60, 61, 64  
 Strange, R. E., 4, 9, 28, 92, 163  
 Straub, J., 376  
 Straughn, W. R., 217  
 Strawinski, R. J., 173  
 Strecker, H. J., 179  
 Streisinger, G., 40, 42  
 Strittmatter, C. F., 261  
 Strominger, J. L., 20, 34, 163  
 Strong, F. C., 418  
 Strong, F. M., 475  
 Struckemeyer, B. E., 480  
 Stuart, L. S., 541  
 Stuart-Harris, C. H., 58, 59  
 Stubbs, J., 425, 431  
 Stulberg, C. S., 98  
 Stunkard, H. W., 117  
 Su, S., 114  
 Sukhov, K. S., 385, 387  
 Sukhova, M. N., 400  
 Sulzbacher, W. L., 518  
 Sunakawa, S., 38, 39  
 Süpfle, K., 534  
 Surgalla, M. J., 95, 494, 520  
 Surikova, E. I., 392  
 Surkiewicz, B. F., 534, 542  
 Suskind, R. G., 51, 52, 58, 61, 64, 65  
 Suskind, S. R., 353, 354, 369  
 Sussman, A. S., 365, 370  
 Sutter, D., 263  
 Sutton, C. R., 260  
 Sutton, M. D., 422  
 Sutton, W. B., 190  
 Suvorova, G. V., 404  
 Suyama, Y., 369  
 Suzuki, T., 67  
 Svedmyr, A., 52, 56, 57, 58, 61, 64  
 Swanson, H. S., 50, 63  
 Sweeney, B. M., 297  
 Swellengrebel, N. H., 2  
 Swift, H. H., 312  
 Swim, H. E., 184  
 Sykes, G., 536  
 Sylvester, R. F., 504  
 Symonds, K. V., 177  
 Syrett, P. J., 207  
 Syverton, J. T., 98  
 Szidat, L., 117  
 Szilagyi, D. E., 544  
 Szilard, L., 317  
 Szkolnik, M., 417, 418, 428  
 Szulmajster, H. de R., see Robichon-Szulmajster, H. de  
 Szybalski, W., 324, 346, 358
- T
- Tabachnick, J., 191, 192  
 Tabak, H. H., 527  
 Taber, W. A., 250  
 Tabor, C. W., 268  
 Tabor, H., 268  
 Tager, M., 495, 497, 498, 499  
 Takacs, W. S., 535  
 Takahashi, H., 203-46; 209, 216, 218, 222, 226, 232, 234, 270  
 Takahashi, S. M., 542  
 Takahashi, T., 366  
 Takeda, Y., 212  
 Talling, J. F., 302  
 Tamura, G., 265  
 Tanabe, H., 117  
 Tanaka, C., 60  
 Tanaka, N., 66  
 Tang, P., 221  
 Taniguchi, S., 209, 211, 215, 218, 221, 223, 226  
 Tanner, F. W., Jr., 254  
 Taranenko, A. F., 398  
 Tarizzo, M. L., 63  
 Tarr, H. L. A., 253  
 Tatum, E. L., 167, 168, 170, 365, 370  
 Taubeneck, U., 18  
 Tausson, W. O., 173, 174  
 Tavormina, P. A., 262  
 Taylor, A. L., 511  
 Taylor, A. R., 52  
 Taylor, A. W., see Wilson Taylor, A.  
 Taylor, D. J., 104  
 Taylor, E. S., 535, 536  
 Taylor, H. E., 326  
 Taylor, H. E., see Ephrussi-Taylor, H.  
 Taylor, J. H., 321  
 Taylor, R. M., 107  
 Taylor, W. W., 527  
 Teas, H. J., 365, 370  
 Tebbutt, A. H., 492  
 Teixeira de Freitas, J. F., 114  
 Tempest, D. W., 79, 88, 90, 91, 92  
 Teramoto, S., 265  
 Terkhova, N. A., 398  
 Terry, L. L., 105  
 Terwilliger, D. E., 320  
 Tessler, J., 541  
 Thal, E., 95  
 Thatcher, F. S., 494  
 Thayer, P., 296  
 Thiesen, C. P., 185  
 Thoma, R. W., 263  
 Thomas, C. A., Jr., 39, 43, 322, 347  
 Thomas, C. H., 429  
 Thomas, E. H., 105  
 Thomas, E. P., 114  
 Thomas, H. E., 444, 455, 456  
 Thomas, H. R., 415, 416, 419  
 Thomas, J. L., 251  
 Thomas, L., 94  
 Thomas, L. J., 114, 117, 118  
 Thomas, L. R., 58  
 Thomas, P. T., 375  
 Thomas, R., 328  
 Thompson, J. B., 422  
 Thompson, P. E., 104, 105  
 Thompson, R., 20  
 Thompson, T. G., 288  
 Thorne, G. F., Jr., 426  
 Thorne, G. W., Jr., 426

Thornley, M. J., 508, 509,  
518, 520  
Thornton, H. G., 173, 177  
Thorp, F., 141, 535  
Thorogood, E., 236  
Thorsson, K. G., 3, 11, 16,  
52, 56, 57, 58  
Thunberg, T., 179  
Thygeson, P., 51, 61, 62,  
63, 64  
Timokhina, M. I., 402  
Tissières, A., 153, 236  
Titmuss, D. H. J., 98  
Tobie, J. E., 103, 105  
Todd, W., 111  
Tokhver, V. I., 237, 384  
Tolbert, N. E., 181  
Tolchinsky, E., 528  
Tolmach, L. J., 27, 37,  
330, 333  
Tomarelli, R. M., 254  
Tomcsik, J., 2, 3, 4, 6, 11,  
85, 91  
Tomizawa, J., 38, 39  
Tomlinson, A. H., 251, 265  
Tomlinson, N., 179, 184,  
251  
Tompsett, R., 495  
Tongeren, H. A. E. van,  
541  
Tonney, F. O., 106  
Toomey, J. A., 535  
Toothell, J. P. R., 432  
Topley, W. W. C., 493  
Topper, Y. J., 166  
Torrey, J. G., 483  
Toumanoff, C., 114  
Tournier-Lasserre, C., 115  
Tousimis, A. J., 52  
Townsend, P. M., 263  
Tracey, R. L., 533  
Trápido, H., 112  
Traum, J., 140  
Travis, R. V., 461  
Traxler, R. W., 267  
Trecanni, V., 173, 174  
Treffers, H. P., 88  
Trelawny, G. S., 272  
Trumbull, M. L., 110  
Tsui, T., 475  
Tsukamura, M., 228  
Tuck, H. A., 60, 61, 64  
Tulasne, R., 17, 18  
Tumanian, M. A., 391  
Tung, M., 114  
Turel, F., 486, 487  
Turner, D. I., 432  
Turner, E. M., 251  
Turner, G., 535  
Turner, H. C., 51, 58, 59  
Turner, J. C., 167  
Tuve, T. W., 258  
Tyrrell, D. A. J., 58, 61

## U

Uchitel', I. I., 402

Uehleke, H., 18  
Uetake, H., 339  
Ukita, T., 270  
Umbarger, H. E., 187  
Urbain, W. M., 517  
Uribe, C., 107  
Ushakova, A. A., 403  
Utter, M. F., 179  
Uyeno, S., 247  
Uzdins, K., 533

## V

Vahle, C., 2  
Vainberg, B. G., 387  
Vakili, N. G., 378  
Valentine, F. C. O., 495  
Valleau, W. D., 449  
Vallentyne, J. R., 302  
Van den Ende, J., 543  
van den Hamer, C. J. A.,  
see Hamer, C. J. A. van  
den  
Van der Meer, G., 110  
van der Veen, J., see Veen,  
J. van der  
Vanderwinkel, E., 4, 6, 7,  
10  
Vande Velde, A. J. J.,  
533  
Vanecko, S., 225, 226  
Vanek, J., 110  
van Herick, W., see Herick,  
W. van  
van Heyningen, W. E., see  
Heyningen, W. E. van  
van Irtson, W., see Irtson,  
W. van  
Vaniushin, B. F., 389  
Van Lanen, J. M., 254, 478  
Van Niel, C. B., 213, 215,  
216  
Van Phung, Le, see Le-Van  
Phung  
VanRavenswaay, T., 52, 56,  
57  
Van Schaack, V., 424  
Van Sumere, C. F., 164  
van Tongeren, H. A. E.,  
see Tongeren, H. A. E.  
van  
Van Uden, N., 249  
Varner, J. E., 225, 234,  
235  
Vasconcelos, C. M., 115  
Vasilenko, A. G., 385  
Vasilov, S. I., 406  
Vasiurenko, K. I., 389  
Vaughn, C. M., 117  
Vaughn, J. R., 423, 428  
Vaughn, R. H., 191, 192  
Veen, J. van der, 54, 58,  
63  
Veisfeiler, I. K., 387  
Vely, V. G., 209  
Vening, L. D., 250  
Venkataraman, R., 212  
Vennes, J. W., 3, 6, 16,  
17  
Vergara, C., 418  
Verhoeven, W., 208, 212,  
213, 215, 216, 223  
Verlinde, J. D., 60  
Vernon, L. P., 214  
Verona, O., 431  
Vershilova, P. A., 405  
Versteeg, J., 60  
Vigneaud, V. du, 269  
Vinegar, R., 527  
Vinh, L. T., 50, 63  
Vinograd, J., 324  
Viranuvatti, V., 114  
Virat, J., 50, 63  
Virtanen, A. I., 203, 216,  
225, 237  
Visconti, N., 42  
Vishniac, H. S., 284  
Vishniac, W., 146  
Visser, D. W., 270  
Viswanathan, L., 266  
Vivell, O., 62  
Vivino, J. J., 496  
Vippö, A., 110  
Vogel, H., 116, 117, 118  
Vogel, H. H., 480  
Vogel, H. J., 179, 257,  
350, 353  
Vogel, J., 68  
Vogt, M., 529  
Voight, R. B., 528  
Vojnovich, C., 254  
Volcani, Z., 486  
Volkman, E., 41  
Vollenweider, R. A., 283  
Vollmayer, E., 270  
Von Brand, T., 108  
von Glander, R., see Gland-  
er, R. von  
Von Plotho, O., 533  
Von Saltza, M. H., 475  
Vulton, M. W., 431  
Vygodchikov, G. V., 400,  
403

## W

Wachsmann, J. T., 16  
Wagenaar, R. O., 520  
Wager, O., 55  
Wagner, R. P., 365, 370  
Wahlroos, O., 209  
Wailling, D. G., 496, 499,  
504  
Wainwright, L. K., 317  
Wainwright, S. D., 206, 210,  
217  
Walte, C. P., 543  
Walker, D., 61, 64  
Walker, D. L., 68, 67  
Walker, J. B., 287  
Walker, J. C., 461, 482  
Walker, J. T. A., 529  
Walker, N., 167, 173, 174,  
177

- Walker, T. K., 155, 156  
 Walker, W. J. G., see  
   Greaves-Walker, W. J.  
 Wallace, J. M., 451, 452  
 Wallen, V. R., 427, 434  
 Wallendal, P., 487  
 Wallis, M., 263  
 Walston, H. D., 496  
 Walston, V. M., 105  
 Walton, B. P., 257  
 Ward, E. N., 528  
 Ward, R., 51  
 Ward, T. G., 50, 51, 52,  
   53, 54, 55, 59, 60, 61, 62,  
   63, 64, 65  
 Wardlaw, A. C., 111  
 Ware, G. C., 230  
 Warfield, M. S., 51, 52,  
   59, 65  
 Warner, A. C. I., 206  
 Warren, J., 53  
 Warshaw, L. J., 543  
 Warshowsky, B., 525-50  
 Washington, J. E., 105  
 Washington, O., 339  
 Watanabe, A., 237, 291  
 Watanabe, I., 40  
 Waters, C. E., 442  
 Watertor, J., 482  
 Watson, D. W., 77, 82, 87,  
   88, 89, 90, 91, 94, 95  
 Watson, I. A., 378  
 Watson, J. D., 30, 38, 41  
 Wattenberg, H., 287  
 Weaver, R. H., 251  
 Weber, M. M., 153  
 Weed, L. A., 532  
 Weibull, C., 1-26; 1, 2, 3,  
   4, 6, 7, 10, 11, 12, 13,  
   14, 16, 17, 18  
 Weidel, W., 27-48; 20, 28,  
   29, 30, 31, 32, 33, 34, 36,  
   37, 41  
 Weigle, J. J., 336, 338  
 Weil, E., 81, 82, 87, 88,  
   91  
 Weimberg, R., 184  
 Weinberger, H. J., 17, 18  
 Weindling, R., 415, 416  
 Weiner, M., 310  
 Weinfeld, H., 256  
 Weinstein, A., 371  
 Weinstein, P. P., 115  
 Weintraub, R. L., 270  
 Weissman, N., 82, 88, 90  
 Welch, A. D., 252  
 Weller, T. H., 115  
 Wells, A. F., 203  
 Wells, A. G., 86  
 Wells, W. H., 117  
 Welsch, M., 8  
 Welshimer, H. J., 3  
 Wender, I., 174  
 Werkman, C. H., 179, 267  
 Werner, J. H., 50, 51, 52,  
   53, 55, 58, 63  
 Werner, R., 534  
 Wernicke, R., 533  
 Wessel, G., 222  
 Wester, R. E., 421  
 Westerfield, W. W., 222, 228  
 Westergaard, M., 318, 319,  
   336  
 Westlake, D. F., 302  
 Westphal, A., 106, 110  
 Westwood, J. C. N., 98  
 Wetmore, R. H., 474, 477  
 Wheeler, H. E., 365-82;  
   372, 376  
 Whistler, R. L., 163  
 White, A. G. C., 105  
 White, G. B. B., see Bruce  
   White, G. B.  
 White, G. F., 112  
 White, P. R., 469, 470,  
   472, 477, 478, 485  
 Whitehead, J. E. M., 503  
 Whitehouse, H. L. K., 372  
 Whiteside, J. E., 51, 58,  
   59  
 Whiting, B. L., see Lee-  
   Whiting, B.  
 Whitwell, F., 93  
 Wiame, J. M., 4, 6, 7, 10  
 Wickerham, L. J., 224  
 Wijler, J., 213, 216  
 Wilcoxson, R. D., 377  
 Wild, G. M., 164  
 Wilder, H. C., 113  
 Wilkins, M. H. F., 366  
 Wilkinson, J. F., 166  
 Williams, A. L., 267  
 Williams, H. H., 258  
 Williams, L. E., 422, 427  
 Williams, N. J., 512, 514  
 Williams, O. B., 541  
 Williams, R. C., 35  
 Williams, R. E. O., 493  
 Williams, R. P., 353  
 Williams, W. L., 137  
 Williamson, D. H., 21  
 Willison, R. S., 455, 457  
 Willson, C. P., 187  
 Wilson, A. T., 541, 542  
 Wilson, G. B., 375  
 Wilson, G. S., 82, 94, 98,  
   493  
 Wilson, J. F., 112  
 Wilson, P. W., 153, 203,  
   230, 231, 235, 236, 237  
 Wilson, R. A., 416, 418  
 Wilson, S. M., 314  
 Wilson Taylor, A., 81, 97  
 Wilson, T. G. G., 236  
 Wilson, W. B., 287, 297  
 Wiltshire, G. H., 173, 174,  
   177  
 Winfield, M. E., 231  
 Wingard, S. A., 448  
 Winge, O., 366, 367, 370  
 Winogradsky, S., 160  
 Winter, G., 291  
 Winter, H. F., 416  
 Wirth, A., 114  
 Witenberg, G., 114  
 Withell, E. R., 536  
 Witkin, E. M., 311, 312,  
   313  
 Woke, P. A., 109  
 Wolfe, M., 222  
 Wolfe, P. A., 103  
 Wolfe, R. S., 179, 255  
 Wolff, R. L., 271  
 Wolff, S., 313  
 Wolff, S. M., 269  
 Wolfin, E. F., 511, 513,  
   514, 518  
 Wollin, E., 15  
 Wollin, E. F., 521  
 Wollin, H. L., 250  
 Wollman, E. L., 27, 42,  
   43, 44, 45, 337, 338, 340,  
   341, 342, 343, 344  
 Wong, D. T. O., 180, 181,  
   182, 183, 249  
 Wood, H. G., 179  
 Wood, T. H., 511  
 Wood, W. A., 145, 149,  
   164, 187  
 Woodbury, D. H., 511  
 Woods, D. D., 187, 189  
 Woods, P. S., 321  
 Woodward, G., 535  
 Woodward, V. W., 319,  
   369, 374  
 Woody, H. B., 107  
 Woody, N. C., 107  
 Wooley, J. T., 222  
 Woolf, A., 113  
 Wooliams, G. E., 420  
 Woolridge, R. L., 51, 54,  
   58, 59, 60  
 Work, E., 3, 5, 9, 10, 18,  
   163, 271  
 Worth, C. B., 112, 113  
 Wosilait, W. D., 153  
 Wray, A. M., 425, 431  
 Wright, E. S., 536  
 Wright, G. C., 92  
 Wright, H. B., 155  
 Wright, H. D., 95  
 Wright, J. M., 425, 431  
 Wright, L. D., 257  
 Wright, W. H., 103  
 Wyatt, J. R., 110  
 Wyss, D., 525, 530, 537  
 Wyss, O., 235, 236, 314,  
   319  
  
 Y  
 y Abbonenc, C., see  
   Abbonenc, C.  
 y Yaeger, R., 108  
 Yagi, T., 227  
 Yamada, M., 66  
 Yamada, T., 216  
 Yamagata, S., 223  
 Yamamoto, Y., 67  
 Yamane, I., 266  
 Yanofsky, C., 252, 354, 369,

# AUTHOR INDEX

571

370  
Yant, W. P., 543  
Yarbrough, H. F., Jr., 254  
Yasui, G., 509  
Yasunobu, K. T., 168  
Yates, M., 78  
Yates, R. A., 261  
Yčas, M., 258, 259, 261, 273  
Yesair, J., 541  
Yogore, M., 114  
Yokoyama, H., 262  
Young, D. A., 487  
Young, H. C., 416  
Young, M. Y., 533  
Younger, J. S., 528  
Yudkin, J., 533  
Yura, T., 348, 349  
Yuvilai, A., 271

## Z

Zaiman, E., 58

Zaiman, T. E., 61  
Zaitseva, G. N., 388  
Zakharova, I. I., 391  
Zakstel'skala, L. I., 405  
Zamenhof, S., 316, 334  
Zarudnaya, K., 535  
Zasukhina, G. D., 400  
Zatulovskii, B. G., 392  
Zaumeyer, W. J., 415-40; 415, 416, 419, 420, 421, 425, 431, 434  
Zavarzin, G. A., 229, 391  
Zeeuw, D. J. de, 423  
Zehender, C., 18  
Zehnder, A., 302  
Zeitlenok, N. A., 406  
Zelle, M. R., 311, 346, 365, 508, 511, 512  
Zemskov, M. V., 396

Zetterberg, B., 61, 64  
Zhdanov, V. M., 405  
Zherlikova, A. D., 404  
Zhmaeva, Z. M., 399  
Zhukova, I. G., 4, 7, 10, 14, 390  
Zichis, J., 535  
Ziffer, J., 421, 425  
Zil'ber, S. A., 400, 401  
Zimenko, T. G., 394  
Zimmerman, L. N., 258  
Zinder, N. D., 5, 7, 11, 34, 42, 335, 338, 344, 346  
Zintz, R., 62  
Zubok, L. B., 391  
Zuckerman, B., 419  
Zucker, M., 223, 226  
Zuelzer, W., 113  
Zwartouw, H. T., 77, 78, 79, 84, 85, 88, 91

## SUBJECT INDEX

- A**
- Absorption of antibiotics by plants, 432
  - Acetobacter
    - celluloseless mutants of, 155-56
    - enzyme preparations from, 157-59
    - metabolism of, 155-56
  - Actokinase, 148
  - $\alpha$ -Acetolactate
    - formation of, 187
  - Actidione
    - control of cherry leaf spot by, 417
  - Actinoidin, 392
  - Acute conjunctivitis, 62-63
  - Acute febrile pharyngitis, 61-62
  - Acute respiratory disease, 58-60
  - Adaptation
    - to nitrate reduction, 217
  - Adaptive enzyme synthesis
    - genetic control of, 353-54
  - Adenosine triphosphate
    - net gain in fermentations, 150
  - Adenovirus illnesses
    - miscellaneous factors concerning, 63-65
  - Adenovirus pneumonia, 63
  - Adenoviruses, 49-58, 384
    - characterization of, 51-52
    - clinical syndromes induced by, 50
    - epidemiological studies on, 50
    - hemagglutination by, 56
    - host range of, 52-53
    - infectivity titers of, 53-54
    - inhibitors against, 54
    - interaction with tissue culture cells, 56-58
    - oncological effects of, 58
    - serological tests with, 54-56
    - serotypes of, 50-52
    - size of, 52
    - stability of, 52
    - vaccines against, 65
  - Adsorption of bacteriophage, 27-48
  - Aggressins, 78
    - of *Bacillus anthracis*, 91
  - tests for, 86
  - Air
    - disinfection of, 538-39
  - Alcohols, polyhydric
    - metabolism of, 186-87
  - Algae
    - antagonisms between, 302-3
    - nitrogen fixation by, 291
    - nitrogen requirements of, 206-7
    - nutrition and ecology of, 279-308
  - Algal groups
    - distinctive nutritional features of, 281
    - influence of temperature on, 290-91
    - major elements required by, 286-87
    - nitrogen requirements of, 291
    - phosphorus requirements of, 292-95
    - plant hormone requirements of, 295-301
    - trace element requirements of, 287-90
    - vitamin requirements of, 295-301
  - Alkylating agents
    - as disinfectants, 540
  - Amebiasis
    - diagnosis of, 105
    - treatment of, 105-6
  - Amebic dysentery
    - and host nutrition, 104
  - susceptibility to, 104
  - Amino acids
    - essential, 250
    - interrelationships in growth, 268
    - utilization of D-isomers of, 251
  - Ammonia
    - assimilation of, 204
    - incorporation in amino acids, 208
    - permeability of bacteria to, 204
  - Ammonia assimilation
    - fungal products of, 207-8
  - inhibition of, 234
  - Ammonia utilization
    - influence of tricarboxylic cycle acids on, 206
  - Ammonium dehydrogenase, 226
  - Anergie, 473
  - Angular leaf spot of cucumber
    - control of, 422
  - Animal diseases
    - control of, 127-44
  - epizootiology of, 127-29
  - eradication in the U. S., 129-42
  - miscellaneous, need for control of, 143
  - U. S. laws for control of, 129
  - Antagonism
    - between algae, 302-3
    - and plant infections, 415
  - Anthraxnose
    - control of, in bean, 421
  - Anthrax
    - control of, in bean, 421
    - tryptophan synthesis and, 252
  - Anthrax
    - basis of immunity to, 91-92
    - factors influencing development of, 87-93
    - fatal syndrome in, 88-91
    - major pathologic changes in, 89
  - Anthrax toxin, 88
    - chemical nature of, 90
    - discovery of, 89-90
  - Antibiotics
    - control of plant diseases by, 415-40
    - mode of action in plant diseases, 431-35
    - Russian literature on, 392-93
    - see also individual agents
  - Antibody formation
    - Russian literature on, 401-3
  - Antigenic structure
    - influence of prophage on, 339
  - Antigens
    - properties of, 389
  - Antiseptic activity of mercurials, 532
  - Apple rootstock disorder, 453
  - Apples
    - diseases, control of, 416
  - Aromatic compounds
    - metabolism of cleavage products of, 168-71
    - miscellaneous, metabolism of, 171-78
    - oxidation of, 167-78
    - pathways of degradation of, 169
    - ring cleavage of, 167-68
  - Ascochyta blight of peas
    - control of, 423
  - Autolysis of bacteria, 8
  - Auxins
    - in plant tissue cultures, 472



Axenic development of nematode parasites, 115

B

**Bacillus anthracis**  
in vivo metabolism of, 92  
properties of in vivo-grown, 82-83  
virulence factors of, 78, 87-93  
**Bacillus anthracis toxin**  
production of, 93  
**Bacteria**  
immunological properties of structures of, 17  
isolation of in vivo-grown, 82-86  
pathogenicity of in vivo-grown, 77-102  
**Bacterial blights of beans**  
control of, 419-20  
**Bacterial blight of celery**  
control of, 421  
**Bacterial genetics**, 309-64  
see also Mutation; Replication; Transformation; Transduction; Lysogenic conversion; Conjugation; Heterokaryosis; and Genes  
**Bacterial protoplasts**, 1-26  
see also Protoplasts  
**Bacterial spot**  
of peaches, control of, 417  
of tomatoes and peppers, control of, 424  
**Bacterial viruses**  
see Bacteriophage  
**Bacterial wilt of corn**  
control of, 427  
**Bactericidal action of radiation**, 510-11  
**Bactericidal agents**  
action of, 391  
**Bacteriophage**  
adsorption and penetration of, 27-48  
attachment and penetration mechanisms, 34-35  
carriage of genetic information by, 37-38  
functional anatomy of, 34-38  
genetic recombination in, 43  
genetics at the molecular level in, 42-44  
germinal substance of, 38-41  
maturation of, 40  
penetration enzymes of, 31-34  
production in protoplasts, 8  
reviews on, 27  
Russian literature on, 384

**Bacteriophage pyrimidines**  
biosynthesis of, 256  
**Bacteriophage receptors**  
distribution and frequency of, 30-31  
**BCG vaccination**, 405  
**Beans**  
control of blights of, 415, 419-20  
**Biology of microorganisms**  
Russian literature on, 388-95  
**Biosynthesis**  
feed-back control of, 269  
**Bird plague virus**  
nature of, 385  
**Black rot of rutabaga**  
control of, 422  
**Blood flagellates**  
epidemiologic patterns of, 107  
**Blood flukes**, 115-17  
**Blue mold of tobacco**  
control of, 426-27  
**Bovine brucellosis**, 138-39  
**Bovine tuberculosis**, 137-38  
**Brassica viruses**, 448  
**Broccoli**  
control of downy mildew of, 422  
**Brown rot of peaches**  
control of, 418  
**Brucella**  
effect of cellular products on virulence of, 97  
**Brucellosis**, 397  
bovine, 138-39

C

**Cabbage black ringspot**, 448  
**Calcium**  
role of, in nitrogen fixation, 235  
**Canker, bacterial**  
control of, 417  
**Carbohydrates**  
metabolism of, 145-202  
**Carbon dioxide**  
assimilation of, 389  
**Catalase**  
adaptive nature of, 261  
**Cattle**  
contagious pleuropneumonia of, 130  
**Cauliflower mosaic**, 448  
**Celery blight**  
control of, 421  
**Cellulase**  
factors controlling production of, 161  
induction of, 260  
**Cellulose**  
biosynthesis of, 264  
breakdown of, 160-61  
enzymes for degradation of, 160-61  
inhibitors of, 157  
site of formation of, 159  
synthesis of, 155-60  
**Cell wall**  
of bacteria, nature of, 2  
diaminopimelic acid and integrity of, 271  
**Cell walls**  
binding of bacteriophage by, 28  
**Cereal diseases**  
control of, 427  
**Cereals**  
virus diseases of, 461  
**Cestodes**, 117-18  
**Chelating agents**  
growth of algae and, 288-90  
**Chemical composition of microorganisms**, 389  
**Chemical disinfectants**, 525-50  
**Chemosynthesis**  
Russian literature on, 389  
**Cherry diseases**  
control of, 417  
**Cherry rootstock disorder**, 452-53  
**Cherry virus complex**, 456-57  
**Chitin**  
biosynthesis of, 163-264  
**Cholera**, hog, 142  
**Chrysanthemum bacterial wilt**  
control of, 429  
**Chrysanthemum stunt**, 460  
**Cistrons**, 43  
**Citramalate**  
formation of, 187-88  
**Citrovorum factor**, 252  
**Citrus tristeza**, 451-52  
**Coagulase-reacting factors**, 497-99  
**Coagulase**  
staphylococcal, 495-99  
**Cobalamins**, and algal growth, 301  
**Colitis, amebic**, necessity of bacteria for, 103-4  
**Conjugation of bacteria**, 340-46  
direction of, 340-42  
energy requirement for, 345  
quantity of material transferred in, 342-46  
role of tricarboxylic acid cycle in, 184-85  
**Conjunctivitis, acute**, 62-63  
**Contagious pleuropneumonia of cattle**, 130  
**Control of plant diseases**, 415-40  
**Corn diseases**

- control of, 427  
 p-Cresol, oxidation of, 171  
 Croup-associated virus, 67-68  
 Crown gall, 477  
 Crucifers  
   control of diseases of, 422  
 Cucumber diseases  
   control of, 422-23  
 Cucumber mosaic, 448  
 Curly top of sugar beets, 450-51  
 Cutaneous larva migrans, 112-13  
 Cyanide, as a nitrogen-carbon source, 230  
 Cytochromes  
   of denitrifying bacteria, 213-15  
   nitrate influence on concentration of, 214-15  
   and nitrate reduction, 211  
 Cytoplasmic inheritance, 373-74  
 Cytoplasmic membrane of bacteria, nature of, 16
- D**
- 2:4-D (2:4-Dichlorophenoxy-acetic acid)  
   degradation of, 177  
 Death  
   criteria of, 526-29  
   reversible, 530  
 Decarboxylases  
   inducible nature of, 260  
 Denitrification, 208-28  
   influence of oxygen on, 213  
   intermediates of, 215-17  
   pathways of, 215-17  
   problems of, 218  
 Deoxyribonucleic acid  
   antigenicity of, 335  
   assay for, 272  
   as carrier of genetic specificity, 38-41  
   effect of ionizing radiation on, 334  
   effect of mutagens on, 333-34  
   heterogeneity of, and transformation, 332-34  
   incorporation of 5-bromouracil in, 316  
   influence of radiation on, 313-16  
   replication of, 38-39, 321-24  
   structure of, 38, 365  
 Detergents  
   toxic action of, 269  
 Diagnostic methods  
   Russian literature on, 406  
 Diaminopimelic acid  
   and cell wall integrity, 271  
 Dicarboxylic acids  
   synthesis of, 178-85  
   Diphasic variation, 355  
   Diseases, animal  
     control of, 127-44  
   Diseases, human  
     of protozoan origin, 103-12  
   Diseases, plant  
     antibiotic control of, 415-40  
   Disinfection, chemical, 525-50  
     criteria of death in, 526-29  
     test methods for, 529-30  
   Dodder latent mosaic, 447-48  
   Dourine, 137  
   Downy mildew of beans  
     control of, 421  
   Downy mildew of broccoli  
     control of, 422  
   Downy mildew of cucumbers  
     control of, 422  
   Dutch elm disease  
     control of, 430  
   Dysentery, 396
- E**
- Early blight of tomatoes  
   control of, 425  
 Echinococcus multilocularis, 117-18  
 Ecology of protozoa and algae, 279-308  
 Embden-Meyerhof pathway  
   energetics of, 146  
 Encephalitis viruses  
   resistance of, 392  
 Endotoxins  
   of Gram-negative bacteria, 98  
 Energetics of carbohydrate metabolism, 146-55  
 Energy transformations  
   review of, 155  
 Entamoeba histolytica  
   life cycle of, 104  
   metabolism of, 103-4  
   nutritional requirements of, 104  
   pathogenic characteristics of, 103-6  
 Enterotoxin  
   staphylococcal, 494  
 Entner-Doudoroff pathway  
   energetics of, 147  
 Enzymes  
   detection of activity in situ, 86  
   inducible, biosynthesis of, 259-61  
   localization in bacteria, 16-17  
   and penetration of bacteriophage, 31-34  
   Russian literature on, 391  
   staphylococcal, 495-501  
   Epidemic keratoconjunctivitis, 62-63  
   Epidemiological process, 395  
   Epizootiology of animal diseases, 127-29  
   Escherichia coli  
     receptor mosaic in cell wall of, 28-31  
   Ethylene oxide  
     disadvantages of use of, 543  
     equipment for use of, 542  
     mode of action of, 540-41  
     range of activity of, 541-42  
     sterilizing activity of, 540-43  
   Evolution of genetic material, 357-58  
   Exotoxin  
     staphylococcal, 491-93
- F**
- Fatty acids  
   influence on growth, 262  
   toxic action of, 269  
 Fibrinolysin  
   staphylococcal, 499-500  
 Filaria larva migrans, 114  
 Filarias  
   reservoir of human, 114-15  
 Filterable forms  
   Russian literature on, 387  
 Fire blight  
   control of, 416  
 Flagella  
   Russian literature on, 385  
   systematic studies on, 1  
 Flagellates, human  
   epidemiological patterns of, 107  
 Flukes, 115-17  
 Food processing, radiation sources for, 508-9  
 Foods  
   radiation pasteurization of, 517-19  
   radiation preservation of, 507-24  
   reviews on, 508  
   required sterilization doses for, 516  
 Foot-and-mouth disease, 131-35  
   diagnosis of, 135  
 Formaldehyde  
   as a fumigant, 537-38  
 Formate  
   metabolism of, 188-89  
 Formate oxidizing enzyme, 189  
 Formic dehydrogenase, 188-89  
 Formic hydrogenylase,

188-89  
 Formylaspartic acid  
 inducible enzymes for, 260  
 Fruits, miscellaneous  
 control of diseases of,  
 418-19  
 Fumigation  
 agents for, 543  
 Fungi  
 genetics of, 365-82  
 genetics of sexuality in,  
 375-77  
 mutation of, 374-75  
 Fungi imperfecti  
 genetics of, 374

G

Galactoside-permease, 259  
 Gamones, 27  
 Gene conversion, 366-68  
 mechanism of, 367-68  
 Gene mutation  
 pleiotropic effects of, 356  
 Genes  
 control of protein specificity  
 by, 350-55  
 interaction of, 355-56  
 linkage of, in bacteria, 311  
 nature of, 366  
 structure and function of,  
 368-70  
 Genetic control of metabo-  
 lism, 370-71  
 Genetic information  
 of bacteriophage, 37  
 chemical theories con-  
 cerning, 41-42  
 realization of, 39-40  
 Genetic material  
 evolution of, 357-58  
 function of, 348-57  
 position and function of,  
 348-50  
 transfer of, 324-48  
 Genetics  
 of bacteria, 309-64  
 of fungal sexuality, 375-77  
 of fungi, 365-82  
 of imperfect fungi, 374  
 at a molecular level, 42-44  
 of phytopathogens, 377-78  
 of protoplasts, 19  
 Germicidal soaps, 536-37  
 Germinal substance of bac-  
 teriophage, 38-41  
 Germination  
 nutritional requirements  
 for, 270  
 Glands in horses, 131  
 Gliotoxin  
 and plant diseases, 415  
 Glucanase  
 streptococcal fermentation  
 of, 147  
 Glucosan  
 synthesis of, 164

Glucose  
 inhibition of inducible en-  
 zyme formation by, 260  
 polymer formation, from  
 pentoses, 163  
 stimulatory activity of  
 degradation products,  
 266-67  
 synthesis of cellulose from,  
 158  
 Glutamic acid  
 accumulation of, 247-48  
 assay for, 271  
 fermentation of, 187-88  
 Glycerol  
 metabolism of, 186-87  
 Glycine  
 incorporation of, 248  
 Glycogen, bacterial  
 formation of, 164-65  
 Glycolipide  
 biosynthesis of, 264  
 Glycols  
 as air disinfectants, 539  
 Glyoxylate  
 metabolism of, 180  
 Glyoxylate cycle, 182, 248-49  
 Grain diseases  
 control of, 428  
 Grasses  
 control of diseases of,  
 428-29  
 virus diseases of, 461  
 Growth  
 amino acid requirements  
 for, 250-52  
 carbon requirements for,  
 248-50  
 energy requirements for,  
 248-50  
 influence of lipides, sterols,  
 and related compounds  
 on, 262  
 inhibition of, 268-70  
 inorganic ion requirements  
 for, 255  
 nitrogenous requirements  
 for, 250-52  
 peptide requirements for,  
 250-52  
 of plant tissues, chemical  
 regulation of, 475  
 requirements for, 248-68  
 stimulatory factors for,  
 266-68  
 synchronous, 314  
 unbalanced, and mutation,  
 316  
 utilization of fatty acids  
 in, 262  
 utilization of purines, py-  
 rimidines, and their  
 derivatives for, 255-58  
 and vitamin utilization,  
 252-55  
 Growth factors, unidentified,  
 265

Growth inhibitors, miscel-  
 laneous, 270  
 Growth stimulating agents  
 for plants, 474  
 Growth yields, 154-55

H

Halogens  
 as disinfectants, 537  
 Heat, and radiation  
 complementary effects of,  
 516-17  
 Helminths, producing human  
 disease, 112-18  
 Hemadsorption viruses, 49,  
 68-69  
 Hemolysins  
 staphylococcal, 493  
 Herbicides  
 degradation of, 177  
 Heterokaryosis, 346-47,  
 372-74  
 Heterothallism, 376  
 Hiochic acid, 265  
 Hog cholera, 142  
 Homothallism, 376  
 Hop virus diseases, 461  
 Hops  
 control of downy mildew  
 of, 429  
 control of mint rust of,  
 429  
 Hormones, sexual  
 in fungi, 375  
 Horses  
 glands in, 131  
 Host factors  
 in resistance to staphylo-  
 cocci, 501-3  
 Host-parasite relationships  
 in staphylococcal infec-  
 tions, 501-3  
 Hyaluronic acid  
 synthesis of, 163  
 Hyaluronidase  
 factors controlling forma-  
 tion of, 165  
 staphylococcal, 500  
 Hydrazine  
 as intermediate in nitrogen  
 fixation, 233  
 Hydrocarbons, polycyclic  
 metabolism of, 173  
 Hydrogen transfer by Myco-  
 bacterium lepraemuri-  
 um, 83  
 Hydrogenase, 189  
 and nitrogen fixation, 231  
 Hydroxylamine reduction,  
 226-27  
 Hyponitrite reduction, 226-  
 27

I

Immunity

- to anthrax, 91-92  
influence of irradiation on, 401
- Immunization**  
against intestinal diseases, 404
- Immunological properties of bacterial structures**, 17
- Immunology**  
Russian literature on, 400-6
- Induced enzyme synthesis**  
resemblance to mutation, 310
- Inducible enzymes**  
biosynthesis of, 259-61  
control of, 259-61  
glucose inhibition of formation of, 260
- Infection of protoplasts**, 347-48
- Infectious diseases**  
Russian literature on, 395-400
- Inflammation**, 400
- Influenza**  
immunization against, 405
- Influenza D virus**, 66-67
- Influenza virus**  
nature of, 385
- Inorganic ions**  
growth requirements for, 255
- Inorganic nitrogen metabolism**, 203-46
- Inositol**  
biosynthesis of, 254  
utilization of, 254
- Interaction of genes**, 355-56
- Interstitial plasmacell pneumonia**, 110-11
- Iron**  
influence of concentration on porphyrin synthesis, 263  
influence on fermentation, 390
- Irradiated foods**  
public health aspects of, 519-21
- Itaconate**  
synthesis of, 185-86
- J**
- JH virus**, 70-71
- K**
- Keratoconjunctivitis, epidemic**, 62-63
- Kinetin**, 475
- L**
- Lactic acid**  
metabolism of, 190
- Lactobacilli**  
enzymic basis of homo- and heterofermenters, 149  
Lactobacillic acid synthesis of, 262  
Larva migrans cutaneous, 112-13  
filaria, 114  
spirurid, 114  
visceral, 113-14  
Late blight of potatoes control of, 424  
Late blight of tomatoes control of, 425  
Leaf spot of cherry control of, 417  
Leishmania nature of, 107-8  
respiration of, 108  
Leishmanias, 106-10  
Leucocidin staphylococcal, 494-95  
Leuconostoc fermentation of glucose, 149  
Leukemia microbiological screening of chemicals against, 272
- Levan**  
structure of, 164
- L-forms of bacteria** and protoplasts, 17-19
- Lignin**  
metabolism of, 174-77
- Lipides**  
influence on growth, 262-63
- Lipoic acid**, 265
- Logarithmic death rate of bacteria**, 527-29
- Lombard latent virus**, 455
- Lysis from without**, 32
- Lysogenic bacteria**  
incomplete strains of, 33
- Lysogenic conversion**, 337-40
- Lysogeny**  
and transduction, 44-45
- Lysozyme**  
action on bacteria, 2-9
- M**
- Malaria**  
control of, 111-12  
treatment of, 111
- Malarial parasites**, 111-12
- Malate synthetase**, 180
- Man**  
parasitic diseases of, 103-26
- Map distances**, 43
- Masked virus infection in plants**, 441-68
- Masking**  
definition of, 441
- Maturation of bacteriophage**, 40
- Membrane transport**, 247
- Mercaptopurines**  
inhibition of synthesis by, 269
- Mercurials**  
as disinfectants, 530-33  
mode of action of, 531
- Mesaconate**  
formation of, 187-88
- Metabolic disturbances**  
and protoplast formation, 9
- Metabolism**  
of *Bacillus anthracis* in vivo, 92  
of carbohydrates, 145-202  
energetics of, 146-55  
genetic control of, 370-71  
of polyhydric alcohols, 186-87  
of polysaccharides, 155-67  
reviews on, 145-46
- Metabolites**  
reactivation of bacteria by, 527
- Mevalonic acid**, 265
- Microbial nutrition**, 247-78
- Microbiologic assays**, 271-72
- Microorganisms**  
radiation resistance of, 511-16
- Milieu chart**, 282
- Molar growth yields**, 154-55
- Molybdenum**  
and nitrate reduction, 218-23  
in nitrogen fixation, 234-35
- Morphology**  
effect of nutritional conditions on, 270-71
- Mosaic diseases**, 443-50
- Motility**  
genetic factors influencing, 336  
variation of, 310-11
- Multiple sclerosis**  
as a virus disease, 400
- Mumps**, 399
- Muramic acid**, 163
- Mutagenesis**  
chemical, 318-21  
radiation, 318-21
- Mutation**, 309-21  
back-mutation, 319  
and cell division, 317-18  
concept of, 316  
fungal, 374-75  
and gene loci, 318-21  
influence of nucleic acid precursors on, 316  
influence of postirradiation metabolism on, 312-16  
influence of postmutagen treatment on, 320  
nonchromosomal, 309-10  
rate of, 318

# SUBJECT INDEX

577

spontaneous, nature of, 317  
 and unbalanced growth, 316  
 x-ray induced, 314-15  
 Mutation frequency  
 factors influencing, 315  
 Muton, 43  
 Mycobacterium leprae-  
 murium  
 hydrogen transfer capacity  
 of, 83  
 Mycobacterium tuberculosis  
 studies of in vivo-grown,  
 93-94  
 Myrobalan asteroid spot,  
 455  
 Myxoviruses  
 new, 65-69  
 properties of, 65

## N

Naphthalene  
 metabolism of, 173-74  
 Nematodes, 112-15  
 axenic development in vitro  
 of, 115  
 Nervous system  
 infections of, 395  
 role of, in immunology,  
 406-8  
 role of, in infectious dis-  
 ease, 406-8  
 Nitrate  
 kinetics of reduction of,  
 204  
 photochemical reduction  
 of, 221  
 uptake of, 204-5  
 Nitrate assimilation, 208-28  
 effect of ammonia on, 205  
 reduction to nitrite in,  
 218-23  
 Nitrate reducing enzymes  
 adaptive nature of, 217-18  
 Nitrate reductase, 205-6,  
 209-11  
 Nitrate reduction  
 electron source for, 212-  
 13  
 influence of oxygen on, 213  
 and phosphorylation, 209  
 types of, 208-50  
 see also Denitrification  
 Nitrate respiration, 208-28  
 in denitrifying organisms,  
 211-12  
 in nondenitrifying organ-  
 isms, 209-11  
 Nitrate transport  
 adaptive nature of, 218  
 Nitrification, 228-30  
 Nitrifiers, 229  
 Nitrite reductase, 223  
 Nitrite reduction, 223-26  
 Nitrogen (inorganic)  
 absorption of, 204-8

metabolism of, 203-46  
 oxidation states of, 203  
 transport of, 204-8  
 Nitrogen fixation, 230-38  
 by blue-green algae, 291  
 cell-free, 230-32  
 evolutionary development  
 of, 238  
 inhibitors of, 233-34  
 intermediates of, 232-33  
 role of metals in, 234-36  
 scheme for, 231  
 thermophilic, 384  
 ubiquity of, 236-38  
 Nitrogen-fixing organisms  
 metabolism of, 236  
 Nitrogen metabolism  
 general remarks concern-  
 ing, 238-39  
 Nitrogen requirements of  
 algae, 206-7  
 Nuclei  
 bacterial, 1  
 Nucleic acid synthesis  
 and mutation, 316  
 Nucleic acids  
 of bacteria, 388  
 incorporation of unnatural  
 purines and pyrimidines  
 in, 257-58  
 Nucleic acids, and proteins  
 interdependency of synthe-  
 sis of, 259  
 Nutrition  
 microbial, 247-78  
 Nutrition of protozoa and  
 algae, 279-308  
 Nutritional requirements of  
 miscellaneous organ-  
 isms, 250  
 Nutritional requirements  
 of plant tissues, 472-85

## O

Oak wilt  
 control of, 430  
 Oil  
 microbiology of, 393-95  
 Oil seed crop diseases  
 control of, 429  
 Oligodynamic action, 533  
 Oncolytic effects of adeno-  
 viruses, 58  
 Onion diseases  
 control of, 423  
 Organo-nitro compounds  
 reduction of, 227-28  
 Ornamental plants  
 viroses of, 460  
 Orotic acid  
 variation in enzymatic  
 activity for, 261  
 Osmotic pressure of bac-  
 teria, 12  
 Oxalic acid  
 metabolism of, 190  
 Oxidation of aromatic com-  
 pounds, 167-78  
 Oxidative phosphorylation,  
 152-54  
 Oxygen  
 influence of, on radiation  
 resistance, 511  
 P  
 Pantothenic acid  
 assay for, 217  
 and related compounds, 253  
 Parasitic diseases of man,  
 103-26  
 Pasteurella pestis  
 studies of in vivo-grown,  
 95-97  
 Pasteurization  
 radiation and, 517-19  
 Pathogenic bacteria  
 isolation of in vivo-grown,  
 82-86  
 Pathogenicity  
 of bacteria grown in vivo,  
 77-102  
 of bacteria, reviews on, 77  
 biological tests for re-  
 sponsible compounds,  
 86-87  
 chemical basis of, 78-80  
 role of enzymes in, 495-  
 501  
 of staphylococci, 491-506  
 Pathogenicity factors  
 in vivo conditions for pro-  
 duction of, 80-82  
 Pea diseases  
 control of, 423  
 Peach diseases  
 control of, 417-18  
 Peach virus complex, 417-18  
 Pear diseases, control of, 416  
 Penetration of bacterio-  
 phage, 27-48  
 Penicillin  
 biosynthesis of, 264  
 induction of protoplast  
 formation by, 15-16  
 mode of action of, 20-21,  
 34  
 Pentosans  
 hydrolysis of, 165-66  
 Pentose cycle  
 in gluconate fermentation,  
 149-50  
 Pentoses  
 fermentation of, 147-50  
 glucose polymers from,  
 163-64  
 Pepper diseases  
 control of, 424-25  
 Permeability of bacteria  
 review on, 11  
 Permeases, 193-94, 247,  
 259  
 Phagocytosis

- Russian literature on, 401  
 Pharyngitis  
   acute febrile, 61-62  
 Pharyngoconjunctival fever, 60-61  
 Phenanthrene  
   metabolism of, 174  
 Phenol  
   derivatives of, and disinfection, 536  
   mode of action of, 536  
 Phenol coefficient, 529-30  
 Phenolic compounds  
   as disinfectants, 535-37  
 Philodendron leaf rot  
   control of, 430  
 Phosphoketolase, 148  
 Phosphorylation  
   coupling with electron transfer, 151-52  
   and nitrate reduction, 209  
   oxidative, 152-54  
 Photoreactivation, 320, 526  
 Photosynthesis  
   bacterial, 390  
 Phytopathogens  
   genetics of, 377-78  
 Picric acid  
   reduction of, 228  
 Piroplasmosis of cattle, 135-36  
 Plague  
   pathogenesis and immunity in, 95  
   Plague vaccine, 404  
 Plant diseases  
   antibiotics in control of, 415-40  
   bacterial, 486  
   description of, 384  
   fungal, 486  
   mode of action of antibiotics against, 431-35  
   nematode, 487  
 Plant tissue  
   isolation of, 470-71  
 Plant tissue cultures, 469-90  
   applications of, 487  
   modified morphology in, 472-83  
   normal, 470  
   physical conditions for, 471-72  
   physiology of, 472-83  
   single cell, 483-84  
   tumor, 470, 477-83  
 Plant virus diseases  
   antibiotic control of, 431  
   classification of, 442  
   symptomatology of, 442  
 Plant viruses  
   miscellaneous, 461  
   reservoirs of, 462  
 Plants  
   masked virus infection in, 441-68  
 Plasmolysis of bacteria, 2
- Pleiotropic effects of gene mutation, 356  
 Pleuropneumonia of cattle, 130  
 Plum rootstock disorder, 453  
 Plum virus complex, 454-56  
 Pneumococci  
   virulence factors of, 97-98  
 Pneumocystic infection, 110-11  
 Pneumocystis carinii, 110-11  
 Pneumonia  
   adenovirus, 63  
   Poliomyelitis virus inactivation of, 528-29  
 Polyamines  
   biosynthesis of, 268  
   nutritional importance of, 267  
 Polyhedric viruses  
   degradation and synthesis of, 385  
   electron microscopy of, 384  
 Polyhydric alcohols  
   metabolism of, 186-87  
 Polysaccharide synthesis  
   effect of nitrogenous compounds on, 165  
 Polysaccharides  
   metabolism of, 155-67  
   miscellaneous, 166  
 Porphyrins  
   influence of iron on, 263  
 Potato  
   abnormal graft reactions in, 453  
 Potato diseases  
   control of, 423-24  
 Potato mosaics, 443-45  
 Powdery mildew  
   control of, 420  
 Powdery mildew of wheat  
   control of, 428  
 Primary atypical pneumonia virus, 70  
 Prophage, 44-45, 337-40  
 Proteins  
   biosynthesis of, 258-59  
   replication function of, 39  
 Proteins, and nucleic acids  
   interdependency of synthesis of, 259  
 Protein specificity  
   gene control of, 350-55  
 Protocatechuic acid  
   breakdown of, 170  
 Protocatechuic oxidase, 167  
 Protoplasts  
   activity of, 390  
   bacterial, 1-26  
   bacteriophage reproduction in, 8  
   biochemical capabilities 10-11, 14  
   biological capabilities of, 10-11  
   criteria for, 5-6  
   effect of osmotic shock on, 15-16  
   effect of various enzymes on, 15  
   formation by ejection of, 4-5  
   genetic studies on, 19  
   of Gram-negative bacteria, 5  
   of Gram-positive bacteria, 2-5  
   infection by DNA of, 347-48  
   methods for preparation of, 6-10  
   osmotic function of, 11-14  
   permeability of, 11-14  
   permeases in, 194  
   relation to bacterial L-forms, 17-19  
   structure of, 2-6  
   subunits of degraded, 14-17  
   synthetic activities of, 14-15  
   yeast, 21  
 Prototrophs  
   factors influencing yield of, 312  
 Protozoa  
   nutrition and ecology of, 279-308  
 Protozoa producing human disease, 103-12  
 Prune dwarf, 455  
 Public health aspects of irradiated foods, 519-21  
 Purines  
   biosynthesis of, 257  
   as essential nutrilites, 255-58  
 Pyrimidines  
   as essential nutrilites, 255-58  
   synthesis of viral, 256
- Q
- Quaternary ammonium compounds  
   as disinfectants, 534-35
- R
- Rabies, 142  
 Radiation  
   doses for food sterilization, 516  
   and heat, complementary effects of, 516-17  
   lethal action of, 508  
   mechanism of bactericidal action of, 510-11  
   miscellaneous applications

of, 521  
 Radiation damage  
   recovery from, 312-16  
 Radiation preservation of  
   food, 507-24  
 Radiation resistance of  
   microorganisms, 511-16  
 Raffinose  
   fermentation of, 249  
 Raspberry mosaics, 445-47  
 Rate of death of bacteria,  
   527-29  
 Reactivation, 527  
 Receptor mosaic of *Escheri-  
 chia coli* B, 28-31  
 Receptor substances, 27  
 Recons, 43  
 Replication, 38-39, 321-24  
   tracer studies of, 321-24  
 Resistance  
   nonspecific, 395  
   to staphylococci, 501-3  
 Respiration  
   and nitrogen fixation, in-  
   hibitors of, 233-34  
   theories of, 389  
 Respiratory syncytial vi-  
   ruses, 49, 69-70  
 Respiratory tract viruses  
   miscellaneous, 69-71  
   newly recognized, 49-76  
 Reversion  
   genetic, 319  
 Rhamnolipide  
   synthesis of, 166  
 Riboflavin  
   synthesis of, 254  
 Ribonucleic acid  
   participation in virus syn-  
   thesis, 40-41  
 Rickettsiae  
   metabolism of, 391  
 Rickettsial diseases, 399  
 Ring rot of potatoes  
   control of, 424  
 Ringspot diseases, 448-50  
 Root rots  
   control of, 430-31  
 Rose virus diseases, 460  
 Russian literature  
   review of, 383-414  
 Rust of beans  
   control of, 421  
 Rust of wheat  
   control of, 427-28  
 Rutabaga  
   control of black rot of,  
   422

S

Safflower  
   control of damping-off of,  
   429  
 Salicylate  
   formation of, 173  
 Salk vaccine, difficulties

encountered with,  
   528-29  
*Salmonella*  
   variation in motility of,  
   310-11  
 Sanitizers, 535  
 Scab, cucumber  
   control of, 423  
 Scab, onion  
   control of, 423  
 Schistosome cercarial der-  
   matitis, 117  
 Schistosome infections  
   control of, 116-17  
 Schistosomes, 115-17  
 Schizophrenia  
   as a virus disease 400  
 Scion-stock masked virus  
   disorders, 452-53  
 Scrapie in sheep and goats,  
   141  
 Seed-piece decays of potato  
   control of, 423  
 Sendai (influenza D) virus,  
   66-67  
 Serologic methods  
   Russian literature on, 406  
 Serological tests  
   for adenoviruses, 54-56  
 Sesame  
   control of bacterial leaf  
   spot of, 429  
 Shiro line-pattern virus,  
   455  
 Shwartzman reaction, 94  
 Silver  
   bactericidal preparations  
   of, 533-34  
   as a disinfectant, 533-34  
 Single cell tissue cultures  
   plant, 483-84  
 Snapdragon rust  
   control of, 430  
 Soaps  
   germicidal, 536-37  
 Soft rot of spinach  
   control of, 424  
 Soil  
   microbiology of, 393-95  
 Sorbitol  
   metabolism of, 187  
 Soybean bacterial blight  
   control of, 429  
 Spinach  
   control of diseases of, 424  
 Spiruroid larva migrans,  
   114  
 Spores  
   formation and germination  
   of, 270  
 Sporulation  
   nutritional requirements  
   for, 270  
 Staphylococcal infections  
   general considerations of,  
   503-4  
 Staphylococci

factors determining patho-  
   genicity of, 491-506  
   host factors in resistance  
   to, 501-3  
 Stereospecificity of tartrate  
   metabolism, 192  
 Sterilization  
   gaseous, 537-44  
 Sterilization by heat  
   stimulatory factors pro-  
   duced by, 267  
 Sterilizing doses of radia-  
   tions, 516  
 Sterols  
   influence on growth, 262-63  
 Stone fruit viruses, 453-60  
   indexing hosts for, 458-60  
 Strawberry viruses, 462  
 Streptococci  
   factors associated with  
   pathogenicity of, 94-95  
   products of in vivo-grown,  
   94  
 Streptomycin  
   control of bean halo blight  
   by, 415  
 Streptomycin resistance  
   mutants for, 327-28  
 Structure of bacteria  
   reviews on, 1-2  
 Succinate  
   synthesis of, 179-84  
 Sugar beet curly top, 450-51  
 Sweet potato virus complex,  
   448  
 Symptomatology  
   of plant virus diseases, 442  
 Synchronous growth, 314, 324  
 Synthesis  
   requirements for, 248-68  
 Systematics, 384

T

Tapeworms, 117-18  
 Tartaric acid  
   inducible enzymes for,  
   192-93, 259  
   metabolism of, 190-93  
 T-1 bacteriophage  
   receptor for, 29  
 T-2 and -6 bacteriophages  
   receptors for, 29  
 T-3, -4, and -7 bacterio-  
   phages  
   receptors for, 28-29  
 T-5 bacteriophage  
   receptor for, 29-30  
 Temperature  
   influence on algal ecology,  
   290-91  
 Temperature coefficient of  
   mutation, 318  
 Terregens factor, 265  
 Tetrad analysis, 371-72  
 Texas fever, 135-36  
 Thiamine



- assay for, 271  
 penicillin derivatives as  
   substitutes for, 255  
 Thymine-requiring bacteria  
   mutants of, 313  
 Tissue cultures  
   plant, 469-90  
 Tissue flagellates  
   epidemiologic patterns of  
     107  
 Tobacco diseases  
   control of, 425-27  
 Tobacco mosaic infections  
   control of, 431  
 Tobacco mosaic virus  
   development of, 385, 390  
   multiplication of, 485  
 Tobacco ringspot, 448  
 Tolerance  
   acquired, 401  
 Tomato diseases  
   control of, 424-25  
 Tomato ringspot, 449  
 Tomatoes  
   dodder latent virus in,  
     447  
 Toxin production  
   and prophage, 339  
 Toxins  
   pathogenic effects of,  
     396  
   Russian literature on,  
     404  
   see also individual tox-  
   ins  
 Toxoplasma gondii, 108  
 Toxoplasmosis  
   development of causative  
   organism of, 109-10  
   prevalence of, 109  
 Trace elements  
   and growth of algae, 287-  
   90  
 Trace metals  
   assays for, 272  
 Transduction, 335-37  
   abortive, 335  
   and lysogeny, 44-45  
   unstable transductants in,  
     336  
 Transfer of genetic material,  
   324-28  
 Transformation, 325-35  
   assimilation of DNA during,  
     329-31  
   between different species,  
     326  
   competency in, 328-29  
   competition between DNA  
   during, 330-31  
   models of genetic incor-  
   poration during, 332  
   and photoreactivation,  
     320  
   replacement phenomena  
   in, 326  
   steps following initiation  
     of, 331-33  
   time relationships in, 328-  
     29  
   see also Deoxyribonucleic  
   acid  
 Transforming principle  
   genetic heterogeneity of,  
     326-27  
 Translocase, 193  
 Translocation of antibiotics  
   in plants, 432  
 Translocator, 193  
 Transport, 193-94  
   of nitrogenous compounds,  
     204-8  
 Transreplication, 368  
 Trees  
   control of diseases of,  
     430  
 Trematodes, 115-17  
 Tricarboxylic acid cycle  
   and bacterial conjugation,  
     185  
   and growth of yeast, 184  
 Tricarboxylic acid cycles,  
   178-85  
 Tricarboxylic cycle acids  
   influence on ammonia  
   utilization, 206  
 Tristeza  
   of citrus, 451-52  
 Trypanosoma  
   respiration of, 108  
 Trypanosomes, 106-10  
 Tryptophan  
   biosynthesis of, 252  
 Tubercle bacilli  
   dispersion in tissues,  
     398  
 Tuberculosis  
   bovine, 137-38  
 Tularemia, 398  
 Tumors  
   antigens of, 403  
   plant, 398  
 Tumor tissue  
   of plants, 477-83  
 Tungstate  
   role of, in nitrogen fixa-  
   tion, 234  
  

U

 Uridine compounds  
   metabolism of, 162-63  
 Uridine pyrophosphogly-  
   cosyls  
   and polysaccharide synthe-  
   sis, 161-62  
  

V

 Vaccine  
   against adenoviruses, 51,  
     65  
 Variation  
   Russian literature on, 385-  
     87  
 Vegetables  
   control of diseases of, 419-  
     25  
 Vesicular exanthema of  
   swine, 140-41  
 Viral diseases  
   immunization against, 405  
   Russian literature on,  
     399-400  
 Viral diseases of plants  
   antibiotic control of, 431  
   tissue culture study of,  
     485  
 Virulence  
   in vivo factors influencing,  
     80-82  
 Virulence of bacteria  
   reviews on, 77  
 Virulence enhancing tests,  
   86  
 Virulence factors  
   of *Bacillus anthracis*, 78  
   and immunity, 79  
   of *Pasteurella pestis*,  
     95-97  
 Virus 2060, 70-71  
 Virus infections  
   masked, in plants, 441-68  
 Virus pyrimidines  
   biosynthesis of, 256  
 Viruses  
   animal and tissue culture-  
   grown, 98  
   newly recognized respira-  
   tory tract, 49-76  
   reservoir of plant, 462  
   tissue culture of plant,  
     485  
   see also individual agents  
 Visceral larva migrans,  
   113-14  
 Vitamin B<sub>12</sub>, 252-53  
 Vitamin requirements of  
   algae, 295-301  
   influence of temperature  
   on, 290-91  
 Vitamins  
   and microbial growth,  
     252-55  
  

W

 Walnut blight  
   control of, 419  
 Water  
   microbiology of, 393-95  
 Wheat diseases  
   control of, 427-28  
 White pine blister rust  
   control of, 430  
 Wildfire of tobacco  
   control of, 425-26  
 Wilt of cucumbers  
   control of, 422  
 Wilt of tomatoes

# SUBJECT INDEX

581

control of, 425

## X

X-ray induced mutations,  
314-15

## Y

Yeast  
irregular segregation in,  
366  
role of tricarboxylic

cycle in growth of,  
184

## Z

Zygotic induction, 45